

Digital Text and Physical Experience:  
French Digital Literatures  
Between Work and Text



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## **Abstract**

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This thesis takes into consideration the presence of computers and electronic equipment in French literary and multimedia discussions, beginning in the first chapter with the foundation of the Oulipo group in 1960 and taking as a starting point the group's conceptions of the computer in relation to literature. It proceeds in the second chapter to explore the materialities and physical factors that have informed the evolution of ideas related to the composition and reading of digital texts, so as to illuminate some of the differences that may be purported to exist between e-literatures and traditional print works.

Drawing on Roland Barthes' 'Between Work and Text,' the chapters gradually progress into an exploration of spatiality in digital and interactive literatures, taking into account the role of exhibitions in accommodating and diffusing these forms in France, notably the 1985 exhibition 'Les Immatériaux,' to whose writing installations the third chapter is dedicated. The first three chapters thus focus on computer assisted reading and writing prior to 1985. The chapters that form the second half of the thesis deal with more recent years, exploring online and mobile application works, reading these as engendering their own distinct physical spaces that extend beyond the 'site' of the work - both the website or display and the tactile materials on which the work is operated - creating in relation to the reading what Roberto Simanowski terms a 'semiotic body'. The fourth chapter takes into consideration the role of the reader's body in Annie Abrahams' 'Séparation' and Xavier Malbreil's 'Livre des Morts'. The fifth chapter explores gesture as a mode of reading and reinscription in the online, interactive works of Serge Bouchardon. Finally, the sixth chapter looks at mobile application narratives, spampoetry and email art, offering ways of reading the new spatialities these forms generate. The work as a whole aims to offer some perspectives for considering digital literatures as capable of creating complex spatial experiences between work and text.

## **Declaration**

This dissertation is my own work and includes nothing which is the outcome of work done in collaboration except as declared in the preface and specified in the text. It is not substantially the same as any that I have submitted, or, is being currently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is currently being submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the relevant Degree Committee.

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## **Introduction**

### Digital Text and Physical Experience: French Digital Literatures Between Work and Text

*The classical production of writings is aimed entirely at archives. To this way of thinking, the slightest 'loss' is considered a cultural tragedy. Any destroyed manuscript is a burning library, the obliteration of any draft scribbled on a tabletop seems a disaster. Against that museum art, that library-and-dust art, generative writing is an art of consummation that refuses to look back on its tracks, which it regards as nothing more than signs headed for something else.<sup>1</sup>*

#### **Introduction: The framing of this discussion**

This thesis shall deal with several questions and perspectives that arise from consideration of some of the material and physical facets of literary texts created with and for the computer, focusing on works and aesthetics from the French context, from the 1960's to the present day. It is necessary, at the outset of such a variegated discussion, to account for some of the rough delineations traced in my treatment of topics that intersect to form the chapters of this thesis – topics roughly grouped together in the category of 'French digital literatures.'

Imposing categorical delineations upon these works in some respects may be seen as contrary to the sprawling, international and multimedia context, the multifarious and dispersed nature of the field from which these works emerge. Perhaps the most dissonant element of a categorical formulation such as 'French digital literatures' is the suggestion that, at a time when electronic literatures are predominantly flourishing online, making these accessible, translatable and modifiable to reader/users anywhere, such works might still be ascribed to a national

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<sup>1</sup>Jean Pierre Balpe, 'Principles and Processes of Generative Literature' in *The Aesthetics of Net Literature*, ed. by Peter Gendolla and Jörgen Schäfer (New Brunswick, USA; London UK: Transaction Publishers, 2015), p.316.

literary tradition or even a tradition anchored in writing in a particular language, bearing all of the cultural echoes that such choices and formulations insinuate.<sup>2</sup>

Digital literary studies and the works they take as subject are, however, rife with, and indeed often explicitly characterised by and engaged with, such ambivalences of belonging, including but not limited to the relationships of these electronic texts to literary traditions and language affiliations, which are never neatly detachable from these. One of the major, overarching themes and tasks of digital artworks and literatures, then, is addressing both the costs and potential gains of the connectivity that allows for their diffusion and, conversely, the links that are necessarily broken in favour thereof.

It is not so much the case, however, that contemporary digital works represent the finalised results of dissolutions of literary, linguistic and disciplinary boundaries, but rather they at once constitute and document this ongoing and tentative process of dissolution and reconfiguration, finding in digital media a fertile ground for the selective disaffiliations often entailed in the creation of multimedia works to be productively interrogated and enacted. The international nature of online works and the eclectic environments in which these typically thrive, therefore, should not serve to invalidate these questions – those of correspondences in language and literature – but rather to render them all the more compelling.

As Sandy Baldwin notes in the preface to *Regards croisés: alternate perspectives on digital literature*, ‘...electronic culture is neither reducible to nor separable from national cultures.’<sup>3</sup> There are, accordingly, makers of digital literature, such as Philippe Bootz or Jean Pierre Balpe, who work with a view to diffusing their texts through the international channels of digital poetry and e-literature, but who would nonetheless claim that certain aspects or approaches to their works represent a specifically French tradition of digital creation.<sup>4</sup>

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<sup>2</sup>Indeed, online works often suggest the arbitrariness of reading language at the outset: frequently the homepage of a non-English language online text offers the reader multiple versions of the work in three or more languages. These options represent fairly equal routes through the texts, however, rather than distinct versions thereof. This apparent universality favours Western and majority languages: English and Spanish tend to feature heavily. Serge Bouchardon’s 2010 e-literature work, ‘Déprise,’ for example, is offered in French, English and Italian. Serge Bouchardon, *Déprise* (2010) <<http://www.utc.fr/~bouchard/works/Deprise.html>> [accessed 6 March 2018].

<sup>3</sup>*Regards Croisés: Alternate Perspectives on Digital Literature*, ed. by Sandy Baldwin and Philippe Bootz (Morgantown: West Virginia University Press, 2010), p.xiv.

<sup>4</sup>This is how Bootz presents the ‘esthétique de la frustration,’ for example. Philippe Bootz, *Poésie numérique: la littérature dépasse-t-elle le texte?* (2005)

Alain Vuillemin also points out, in *Informatique et poésie*, that ‘poetry generated exclusively by computer remains a European phenomenon, and more specifically French.’<sup>5</sup> I shall return to these questions of partial, national, and aesthetic affiliation: suffice it to introduce these ideas for now as aspects to bear in mind on entering a discussion that works forward from the emergence of early electronic works in France in the late 1960’s.

### **Digital ‘texts’ and print ‘works’**

The questions of literariness versus textuality that linger over these works are still more granular and nuanced than those of ‘national’ art forms. The choice of the term ‘digital literature,’ over ‘digital art,’ or other designations, to encompass the works discussed here, is deliberate, aiming to reinforce one of the major concerns that runs consistently through these chapters, namely the necessity of reinterpreting literary outward form in a post-print era, and reconciling the disparity between literary recognition allocated to works as opposed to texts. I shall draw on Roland Barthes’ *oeuvre/texte* distinction in later chapters, demonstrating how some of the works I shall discuss demonstrate simultaneous proximity to these ostensible poles, asserting the presence and promises of the liminal space between.<sup>6</sup>

As a result of the task of remodelling and reconceptualization of categories that the latter issue necessarily implies, this discussion will include considerations of methodologies and experiments traditionally closer to the visual and plastic arts. I shall investigate how these dimensions have been adopted such as to enlarge the scope of physical textual experience. Resisting the restriction of considerations of the literary to text-based elements, I strive rather to examine how images, sounds and

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<[https://www.ac-clermont.fr/disciplines/fileadmin/user\\_upload/Lettres-Histoire/formations/Lettres/la\\_poesie\\_numerique.pdf](https://www.ac-clermont.fr/disciplines/fileadmin/user_upload/Lettres-Histoire/formations/Lettres/la_poesie_numerique.pdf)> [accessed 2 March 2018].

<sup>5</sup>Alain Vuillemin’s article, ‘Informatique et poésie,’ is referenced in Serge Bouchardon, *Digital literature in France* (2012) <<http://www.dichtung-digital.org/2012/41/bouchardon/bouchardon.htm>> [accessed 2 March 2018].

Bouchardon also refers in this article to Philippe Bootz’s observations on certain characteristics of ‘national’ digital texts, such as the specificity of text generation to the French tradition, and of hypertext to the United States.

Bouchardon also writes of hypertext as a form that had ‘connu une certaine vogue aux États-Unis dans les années 1990.’ Serge Bouchardon, *Littérature numérique: Le récit interactif* (Paris, Lavoisier: 2009), p.19.

<sup>6</sup>Roland Barthes, ‘De l’oeuvre au texte,’ in *Le Bruissement de la langue* (Paris: Seuil, 1984), pp. 69-77.

kinetic or tactile features are incorporated to serve and relay the broader expression of these literal components.<sup>7</sup>

The more recent works and their associated creative modes and tools that I discuss in the later chapters belong mainly to the category of so-called ‘digital born’ works, a term that seeks to distinguish these from works initially conceived in writing or print, and later digitised.<sup>8</sup> This distinction may be made more clearly with recent works, and indeed understandably so, considering the increase in accessibility of technology over time. I shall show in the first chapter that, though the early works of the Oulipo group, which contributed to the establishment of the field of digital literature in France, could scarcely be considered ‘purebred’ digital examples, the group’s early undertakings are particularly helpful as a point of entry into this discussion, insofar as these represent precisely the bridge encountered between print and digital possibilities at the time.

Indeed, it was issues of access and required expertise in computing, among others, that saw the Oulipo formulate ideas about assisted literatures in an anticipatory, rather than a simultaneous way, as they eagerly sought and awaited increased practical possibilities to engage more directly with these machines. In many cases, impressively, a reasonably clear anticipation of what would later be formulated by specially-created computer programs, as ‘digital born’ generated works, can be seen as sketched out on paper in these early years of speculation by the Oulipo.

While enthralled by the notional promises of a ‘literature machine,’ the group was, in the case of most of its projected experiments, restricted to forecasting the machine’s marks as something more akin to rough pencil calculations. On the other hand, these written works were accurate in their predictions largely insofar as many of the works created and programmed once the technologies actually became more available were done so either by members of the Oulipo group or else by its more computing-centric offshoot, the Alamo, and a number of years were to elapse before more French writers became interested in text generation and assisted composition.<sup>9</sup>

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<sup>7</sup>I use ‘literal’ here in accordance with the term’s definition as proposed in John Cayley, *Literat Art* (2004) <<http://www.electronicbookreview.com/thread/firstperson/programmatology>> [accessed 2 March 2018].

<sup>8</sup>The origin of the term ‘digital born’ may be found in N. Katherine Hayles, *Electronic Literature: New Horizons for the Literary* (Notre Dame; Indiana: University of Notre Dame Press, 2008), p.3.

<sup>9</sup>Alamo, *Atelier de Littérature Assistée par Mathématique et les Ordinateurs* (2018) <<http://www.alamo.free.fr/pmwiki.php?n=Alamo.Historique>> [accessed 2 March 2018].



The Oulipian writer Noël Arnaud's *Poèmes Algol*, for instance, published in 1968, represented a successful attempt at exhausting a limited vocabulary in a rigorous series of permutations, completed without the use of a computer, but in a perfect prediction of the forms that would later result from text generation projects.<sup>10</sup> To consider only those literatures that may be neatly classed as 'digital born' in this discussion would neglect the interest of comparison and the indebtedness of later 'digital born' works to this noteworthy period of Oulipian incubation. Further, the observation of this feasibility of manually elaborating the functioning and appearance of the work to be digitally created – as was necessarily the approach adopted by the Oulipo to its projects on several occasions - also allows for a more focused inquiry into the computer's role in such projects once these machines were finally accessible to writers.

Finally, these prior examples serve to demonstrate the currency of the notion of 'digital born' works, and to distinguish the methods that correspond directly to composing for and reading on the screen. The methods and aesthetics drawn upon in composing works that exploit features that only new technologies may effectively offer did not emerge readily available to digital creators, but were developed as the result of several stages and various paths of experimentation.

These creators took aspects of composition practices more closely tied to print and probed these for potential richness in digital remediation, gradually broadening the scope of their considerations to include new forms of spatialization and distribution that would accommodate the procedural, ephemeral and fluctuating natures of multimedia texts as these evolved. In these chapters, I investigate how writers in the French context interacted with these possibilities, prospects and obstacles at various stages, in different settings and by way of a variety of channels and forms of diffusion.

### **Historical considerations**

This discussion covers an extensive time period that begins in the 1960's, leading up to recent years. Drawing examples from various stages of the emergence and development of electronic texts, I hope that the resulting juxtapositions shall underscore the way in which physical and material factors influenced the kinds of

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<sup>10</sup>Noël Arnaud, *Poèmes Algol* (Verviers, Belgium: Temps mêlées, 1968).

literatures conceived for reading and composing with computers, in addition to the differing characteristics of the successive phases that such literatures have passed through over the course of their evolution.

In the first chapter, I examine the projections and theories that paved the way for literatures ‘assisted’ by computers, as these were imagined by the writers of the Oulipo. Beginning with some of the earliest instances of adoption of the computer by literary writers, I demonstrate how the concept of literariness was, from this point onwards, to a great degree redefined in relation to computing equipment and evolution of the latter in terms of material possibilities and forms.

Whereas in the early years, from the late 1960’s onwards, the computer was seen above all as a tool of calculation that would contribute to literature as a great multiplier and permutator, by the 2000s, as seen in the works discussed in the later chapters, the computer had been repurposed as a very different kind of instrument, with regard to its literary and multimedia applications.

It was certainly not literary influences that drew out these changes in a practical sense, but it may be observed that computer-based literary works took their cues from the shifts in perception of computer use, which have given rise to several recent works that go beyond the mere inhabitation of the computer as a tool for transmission and reading, to generate critiques and questions, interrogating the roles of the text, reader, and machine in the various transactions and gestures that have come to characterise the act of reading with the computer, or recently with other electronic devices, such as tablets and touchscreen mobile phones.<sup>11</sup>

In order to maintain a useful proximity to these literary questions, without establishing a concentration thereon that excludes and stifles the very pertinent, adjacent works which take less evidently narrative or literal forms, I have chosen to consider digital text works in a broad manner, that selects as its examples a deliberately varied range of genres and manifestations from the landscape of existing works.

To argue in favour of the possibility of reading and interpreting hypertext works, for instance, using the critical, hermeneutic methods which have been

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<sup>11</sup>These self-aware texts are described using various terms, among these the term ‘technotext’ proposed by N. Katherine Hayles to denote a ‘literary work that interrogates the inscription technology that produces it.’ N. Katherine Hayles, *Writing Machines* (Cambridge, Mass.; London: MIT Press, 2002), p.25.

traditionally applied to print literary works, is not my aim here, but rather I strive towards a more broad-ranging (and as such necessarily more dispersed) discussion of physical, bodily and material experience as these come into play in readers' engagement with digital textualities.<sup>12</sup>

The discussion shall often draw, therefore, on texts which are not necessarily 'literary' in a copious or text-heavy sense, and which do not base their claim to literariness on this weighting of content, but which, crucially, engage with the expressive potential of textuality, literal elements, material textures, instrumental questions, interactive writing, networked communication and other, related modes of literary and narrative experience in ways that call into question or simply call for awareness, in the act of readership, of the body's engagement and involvement with the media and equipment of text generation, display, modification, and diffusion.

These works thus oppose the notion of unified and condensed literary structure, of the Barthesian work as a form 'qu'on tient dans la main,' instead exhibiting the potential for literariness to be expressed through networked forms, ephemeral sites and multiple, dispersed subjectivities.<sup>13</sup> I shall argue that these literatures of spatial interrogation and dimensional play are much more prevalent in the French context than text-heavier forms, such as hypertext, of which a few examples exist.<sup>14</sup>

My argument is that the originary, intermedial context from which these texts emerged in France and their continued encounters with exhibition settings have forged and particularly nurtured these forms concerned with dimensionality and the physical space of the work. Though certain critics and makers of digital literature argue that analyses and critical considerations of e-literatures should absolutely entail the reader's understanding of the underlying code, of which the texts visualised on screen are ultimately 'made,' I argue that such an approach fails to offer alternative routes through which readers unfamiliar with coding may nonetheless come into contact with and explore digital texts.<sup>15</sup>

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<sup>12</sup>N. Katherine Hayles has already brilliantly demonstrated the tenability of literary hermeneutic approaches to hypertext in her *Writing Machines* (2002) and *Electronic Literature* (2008).

<sup>13</sup>*Ibid.*, p.71.

<sup>14</sup>For examples of French hypertext, see authors François Coulon and Lucie de Boutiny.

<sup>15</sup>Hayles notes theorists who have argued this: 'as he (Loss Pequeño Glazier) and others have argued, notably Matthew Kirschenbaum, John Cayley, and Matthew Fuller, code must be considered as much a part of the "text" of electronic literature as the screenic surface.' Hayles, *Electronic Literature*, p.35.

Indeed, it is not through a detailed dissection of the binary skeleton beneath the work, but rather through the physical manipulations of interactive texts, through the synesthetic dimensions of multimedia, and, in some cases, through virtual reality, augmented reality or three-dimensional, immersive forms that most readers will encounter recent digital works. In other words, the lay reader is typically introduced to digital works as texts that require a range of bodily implications much more dynamic and tactile than those of the traditional act of reading.<sup>16</sup>

These are questions to which I will pay particular attention in the later chapters, discussing works that constantly remind the reader of the necessity of her body for the continuation, constitution and evolution of the work being read and experienced. I shall also demonstrate the way in which the body is brought into play as subordinated to the commands of the programme or the work; the body is thus engaged as an entity whose relationship of control over the computer is constantly shifting between a false, highly competent mastery and a frustrated, opaque alienation from the inner workings of the machine.

Without the necessary expertise required to engage with the coded or ‘deeper’ technological aspects of the work, the reader is often deliberately estranged from the work due to ignorance of its functioning and, as such, is never really allowed to forget the superficial and limited scope of her modes of relating to the computer, through physical interactivity that does not always suffice in attempting to connect with the operations and processes that underlie the technological platform’s physical components. I shall soon explore what artists’ intentions might be in constructing works such that they deliberately frustrate and trouble the reader’s traversal of the text, demonstrating the correspondence of such elements to a particular aesthetic strategy.

### **Between embodiment and interpretation**

Roberto Simanowski has argued that:

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Bootz makes the argument in favour of code as an integral part of the work in ‘The Unsatisfied Reading,’ see Bouchardon, ‘Digital Literature in France.’

<sup>16</sup>Perhaps, following Aarseth’s definition of ergodic texts as those in which ‘nontrivial effort is required to allow the reader to traverse the text,’ the physically interactive digital works that I discuss in the later chapters might be read as examples of a kind of physical literalisation of textual ergodicity. Espen J Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore; London: Johns Hopkins University Press, 1997), p.1.

An abstract embrace of the code with no regard to its materialization on the screen or on the site, the formalistic focus on technologies behind the interface neglects the actual experience of the audience and impedes access to the artwork's aesthetics.<sup>17</sup>

This may indeed be true, but Simanowski is not disavowing hermeneutic engagement with the text in favour of a wholly bodily approach.<sup>18</sup> These two approaches may ultimately be understood as mutually fruitful, rather than mutually exclusive.

Simanowski proposes, in his argument, a 'semiotic body,' which implies the actively signifying body of the reader as implicated in and often repurposed by the text in question. Simanowski argues that 'Even in an interactive performance, the phenomenal body can finally be treated as a semiotic body – indeed, it must do so in the context of critical reading.'<sup>19</sup>

In the fourth chapter, I examine how recent online works such as Annie Abrahams' *Séparation* (2002) and Serge Bouchardon's *Déprise* (2010) engage with the question of, and occasional conflict between, physical and hermeneutic approaches to reading, by deliberately rendering the reader's physical engagement with the work a process that is occasionally interrupted by diversions or obstacles. Indeed, reading sections of these works often becomes a frustrating endeavour, created as such in order to remind the reader of the inadequacy of an entirely intuitive and sensory mode of engagement with online works.

The latter methods tend only to be employed by self-professed 'user friendly' texts, which suppress the artificial qualities of their apparent ease of use insofar as possible, neglecting any cautionary responsibilities towards the reader, instead encouraging readers towards experimentation with unconventional texts by removing any major challenges or obstacles.<sup>20</sup> This apparent seamlessness of working and

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<sup>17</sup>Roberto Simanowski, *Digital Art and Meaning* (Minneapolis, MN: University of Minnesota Press, 2011), viii.

<sup>18</sup>Ibid., p.7, 'New media theory is right to stress the central role of the users' physical engagement in interactive art, in contrast to the mere cognitive engagement in perceiving a painting, sculpture, or text. However, besides the physical engagement, it is still possible, even crucial, to approach the work from a hermeneutic perspective.'

<sup>19</sup>Ibid., ix.

<sup>20</sup>Prybylska quotes one of the authors, Brad Bouse, commenting in an article on the conception of *Between Page and Screen*: 'I wanted the casual user to pick up the book, hold it to the camera, and immediately understand how it worked.' Amaranth Borsuk and Brad Bouse, *Between Page and Screen* (Los Angeles, Calif.: Siglio Press, 2012).

reading on the computer is precisely the trap against which Annie Abrahams' online text *Séparation* seeks to warn its reader.

The ambivalence, associated with these blurry perceptual phenomena, towards techno-human coextensivity is a theme to which I shall return, when I discuss how Abrahams' work addresses the concerns associated with continuous and uncritical computer use, and the perils of considering computing equipment a benignly helpful extension of the human body.

It is clear that, owing to the novelty of many of their features, and the absence of most of the hallmarks of conventional literatures, these works demand modes of interaction and analysis that break with many established practices of literary engagement. It is nonetheless the case, I would argue, that the transition from print to digital criticism will necessarily pass through stages in which elements of both older and more recent approaches to the study of literary texts shall be tentatively combined: indeed, any application of the epithet 'literary' to these works depends at least on this stage of revision and redefinition for the recognition in criticism and reception of which aspect of these works exactly is being described.

In order to examine the relationship to literary tradition of the digital works that influence my discussion, I have chosen to apply a somewhat traditional mode of analysis in my research in certain respects. I shall be discussing works throughout mainly with identified authors, rather than taking composition as something entirely mutating and ephemeral. The recurrence of certain actors in the field, furthermore, such as Serge Bouchardon and Jean Pierre Balpe, inevitably establishes impressions in each case, of something akin to a personal voice or authorial approach, or at least a small number of evolving approaches to engaging with the aesthetic options and choices available.

As I argue in my conclusion, the notions of authorship and creative intentionality remain very relevant and illuminating here, regardless of the diversification of forms created and strategies being used by the makers of these texts. Among the writers to whose works I shall refer in the final chapters is Serge

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Agnieszka Przybyszewska, *Lit(b)eracy Between the Book, the Page and Screen – On Between Page and Screen by Amaranth Borsuk and Brad Bouse* (2013) <<https://conference.eliterature.org/critical-writing/litberacy-between-book-page-and-screen-%E2%80%93-between-page-and-screen-amaranth-borsuk-0>> [accessed 31 May 2018].

Original quote from D. Shook, *Books 2.0, #1: Between Page and Screen* [link expired; accessed 6 March 2018].

Bouchardon, whose works display a sustained interest in the possibilities of tactile intervention in digital texts. Bouchardon's online works *Toucher* (2009) and *Déprise* (2010), both of which I discuss in chapter five, demonstrate Bouchardon's engagement with important aspects of digital and haptic textualities.

### **The two stages of this discussion**

I have split my discussion into two sections of three chapters each. The first section consists of what might be considered, overall, a materialist reading of the emergence, establishment and evolution of French digital literature, insofar as my revisitation of certain works produced and theorised from the 1960s onwards, with computing and computer assistance in mind, pays particular attention to the forms taken by the computing equipment of the time, as well as considering accessibility of devices and the kinds of physical experiences eventual exposure engendered.

My discussion of the creative and experimental climate of each period is necessarily compacted, and reference to early writers outside of the Oulipo is limited, in favour of a discussion that extends much further ahead, and demonstrates how these early experiments and ideas might be regarded in the wake of the works, genres and methods that have emerged since. I do not mean to suggest that the Oulipo were the very first writers to consider the computer in relation to literary production, rather, the group simply began to engage with permutational cross-disciplinary creation and the exhibition context in a way that facilitates my exploration of the spatial and material dimensions of such texts' development.

The chapters of this thesis are arranged in chronological order, beginning at a definite point in November 1960, the date of the foundation of the Oulipo, and moving forward via subsequent events, notably exhibitions such as *Les Immatériaux* in 1985 and *Espaces Interactives Europe* in 1996, leading to the current creative landscape. This chronological approach is not at all an exhaustive historical discussion that allocates even coverage to the range of actors in the field of French generated and digital literatures, rather it homes in on specific writers, themes and practitioners of digital creation over time and the accompanying unfolding of forms, as these inform and support the specific questions being addressed: work/text boundaries and the role of digital creation in questioning the place of 'literariness' at a remove from the physical structure of the print work.

The linear chronology of these chapters allows for the parallel evolution of computing equipment and literary computing practices, both in terms of composition and reading, to be demonstrated and explored as a process marked by a series of important material and methodological developments, the two of which were frequently intertwined. This preliminary navigation of the establishment and constitution of the field, particularly the diffusion and development of digital literatures, and the specific, technical evolutions that lent themselves thereto, also helps to provide context for criticism and consideration of the more recent works, which I discuss in the second part.

Finally, the temporal indicators underlined in this discussion emphasise the rapid pace of diversification of the field of electronic literature since its inception, as well as the responsivity of these literatures to the possibilities offered by technological developments, thus allowing for contemporary works to be considered in an unapologetically anticipatory manner, however difficult it is to forecast the developments to be expected from any single one of the multiple trajectories being pursued today.

The first three chapters examine the early development of digital literature in France, and explore some of the works that are often evoked as pioneering examples or precursors. Specifically, revisiting these works and the ideas that accompanied them, considering the material context, both in terms of the contemporary configurations of hardware and its accessibility, is brought to bear on analysis of the types of works subsequently produced. This approach, furthermore, allows for the delineation of the limits of certain forms of experimental literature that were met towards the end of the 1960's and the technological revivals of some of these methods that would later take place.

The first chapter, '*Des machines qui travaillent pour nous*,' evokes in its title the words of the Oulipo's co-founder, Raymond Queneau, and discusses the projects and discussions of the 1960s and 1970s, demonstrating the conditions under which the writers of the Oulipo group were beginning to approach the development of computer-assisted literatures. The discussion in this chapter focuses in particular on composition, whereas the chapter that follows looks at contemporary and subsequent developments in assisted and computerised reading.



The second chapter proceeds to address the evolution of the ideas that surrounded computer-assisted reading, drawing on the evolution of the computer screen around 1980 as a pivotal moment for the reorientation of computerised reading and writing practices. It signals the passage of computer-assisted reading from initially being the preserve of linguists and statisticians, to the eventual understanding of the computer as a device for private and recreational reading. This development is also inflected by the incorporation of computerised writing projects and animated poetry in exhibitions that took place in Paris from the late 1970s onwards. I discuss specific exhibitions as the kinds of contexts that saw the French public's first encounters with digital literature take place.

This emphasis on the exhibition space as an important context for encounters with digital works, as well as a space that conditioned these works in noteworthy ways, shall continue into the third chapter. In the third chapter, I look at the immense exhibition, *Les Immatériaux*, curated by Jean François Lyotard and Thierry Chaput and held at the Centre Pompidou in 1985, which incorporated a number of different literary elements in its soundtrack, as well as a number of collaborative 'sites,' and a major, collectively authored project, 'Épreuves d'écriture.'

Among the contributors to 'Épreuves d'écriture' were Michel Butor, Jacques Derrida and Jacques Roubaud, and their interactions led to the publication of a print work, also entitled 'Épreuves d'écriture.'<sup>21</sup> The exhibition sites of *Les Immatériaux* included contributions from the Alamo, the group that grew out of the Oulipo in 1981, and which dedicated itself specifically to the development of methods and programmes for the creation of computer-assisted literatures.<sup>22</sup>

In this third chapter I also approach contemporary ideas relating to cultural practices such as collective writing and the incorporation of 'literary' installations in art and multimedia exhibitions, in order to consider how these early, public presentations of technological literatures contributed to the foregrounding of the aesthetics and reception of the works that are today diffused online, in what may be considered an ever-increasingly eclectic and rhizomatic exhibition platform.

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<sup>21</sup>Multiple authors, *Épreuves d'Écriture* (1985)  
<[https://monoskop.org/images/f/f9/Les\\_Immatériaux\\_Epreuves\\_d\\_ecriture.pdf](https://monoskop.org/images/f/f9/Les_Immatériaux_Epreuves_d_ecriture.pdf)> [accessed 6 March 2018].

<sup>22</sup>*30 Years after Les Immatériaux: Art, Science and Theory*, ed. by Andreas Broeckmann and Yuk Hui (Lüneburg: Meson Press, 2015), p.100.

The second part of this thesis draws on these insights first gained into the orientations of early computer-assisted works in order, first of all, to situate the more recent works I discuss in the later chapters in terms of the time of their emergence. The historical foregrounding allows for consideration of the recent availability and relevance of some of these texts' components and the ways in which these works, mainly post-2000 and few over a decade old, relate to questions of literary technology, compared to their textual forebears.

These later chapters thus continue to explore physical and material aspects of texts and their constituent parts, as the questions related to these arise in more recent literatures. In particular, these later chapters address the haptic and embodied reading experiences engendered by certain works of digital literature, by French writers or made in France, created around or after the year 2000, as well as exploring the literary status of installations and specific reading environments and platforms that challenge the stationary and solitary character of the act of readership as it is typically conceived.

Exploring the possibilities offered by various technologies for innovative experiences of reading, as well as the capacities for the physical and interactive engagement of the reader to reinforce thematic and aesthetic properties of the works themselves, I approach the question of whether bodily implication in reading - as it may be achieved to a hitherto unforeseen degree in certain digital literatures - might constitute one feasible and/or promising revision of the notion of literary experience and substance.

I address such motifs as the intervention of the body in the work, as provoked by the text itself or otherwise, and the overlaying of the codified gestures of computer usage with features and actions that are atypical to conventional computing practices for the enhancement of the interactive textual experience. In the fourth chapter, I analyse and compare two interactive works, Annie Abrahams' *Séparation* (2002) and Xavier Malbreil's *Livre des Morts* (2003). Both texts are accessed online and both require the reader's active intervention. In *Séparation*, the reader is urged by pauses and obstacles in the text to withdraw from the anxious clicking that they must undertake in order to reveal the literal components of the work.

Xavier Malbreil's *Livre des Morts* is a very different kind of text; an interactive work modelled on Egyptian and Tibetan books of the dead, the *Livre*

presents its readers with questions about their lived experiences, and prompts reflections on the universal themes of existence and mortality. The individual responses stemming from these reflections are to be inscribed by the work's readers on the site, which is continually enriched by the sedimentation of previous readers' responses, a sort of tapestry, as was also the spirit of the palimpsestual, ancient books on which the work is based.

Considering the different ways in which the *Livre des Morts* and *Séparation* encourage their readers towards an embodied mode of readership, I proceed, towards the end of the fourth chapter, to a comparison of the reader's encounter with these works in terms of notions such as physical immersion, dispersed subjectivity, and neomateriality.

The fifth chapter continues along similar lines of analysis, insofar as it presents two concise sets of examples of what I have termed 'literal choreographies.' By this term, I wish to designate the generation by online texts of a repertoire of gestures and movements performed by the reader that correspond closely to the textual components of the works, often constituting part of a semantic layering whereby the gesture of the reader is somehow linked to an element of the diegesis, whether it be an animated icon within the work or a more abstract gesticulatory echoing of the character's mindset or experience.

This is the case, for example, in Serge Bouchardon's text, *Déprise* (2010), in which the gestures called for by the reader echo the frustrations and slippages felt by the protagonist of the work in his attempts to 'grasp' and take charge of certain aspects of his life. Here I also compare this closer physical experience of textuality, which in many ways represents a reinscription of the equipment and surfaces of computing for the purposes of creative and interactive reading, with the immersed 'reading' of projected works such as text installations, or the experience of site-specific reading environments. I shall consider the ways in which both forms of textuality engender their own literary gestures and immersed modes of relation, demonstrating how such works interact with a certain spatiality of literary experience.

Turning to the most contemporary examples in this discussion, chapter six examines the metapoetics of email and spam literatures, demonstrating how such works might come to represent a radical renegotiation of textual space and a rewriting

of the reader's personal, quotidian sense of spatiality.<sup>23</sup> This chapter also explores the mobile application narrative as a tactile and networked form, considering the differences and similarities between a literary work knowingly downloaded as an 'app' for deliberate reading and the mass-emailed arrival of spampoetry in the unsuspecting reader's inbox.

Finally, in the conclusion, I revisit the perspectives offered by the works discussed throughout, and the contextual and material approach adopted in relation to these, evaluating the extent to which works of this kind, produced, displaced, read and often modified on computers, contribute to a potential reconceptualization of the literary. By this point, I will have explored to a greater degree the ways in which digital textualities highlight the close binding of literary cultures to the physical form of the book, and how these might attempt to mobilise and promote possibilities of literary formlessness that are open, fluctuating, and free from the requirements of physical enclosure and finality.

### **Remediation and the spectre of the book**

A common thread that runs the length of this series of chapters is the notion of 'remediation,' as defined by Jay David Bolter.<sup>24</sup> It might be argued that any discussion of 'literary' material is haunted by the presumed physical form of the book – in Barthesian terms, the *oeuvre* – as an enshrinement of writing and a subsequent signal that distinguishes the literary work from other forms of written communication.

Throughout, I explore the possibility (in this particular case, it is often a question of physical scope, and how this might be inhabited) of a redefinition of literary works, as those which are not necessarily enclosed within the form of the book (*oeuvre*) but rather defining literary writing in such a way that it might also encompass freer forms that engender a physical experience of textuality.<sup>25</sup>

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<sup>23</sup>My use of the term 'metapoetics' is inspired by Martial Martin, 'L'irruption d'une nouvelle forme narrative: les 'alternate reality games' in *E-formes: Écritures visuelles sur supports numériques*, ed. by Alexandra Saemmer and Monique Maza (Saint-Étienne: Publications de l'Université de Saint Étienne, 2008), p.58: 'Très clairement, les ARG participent, à la fois d'une narrativisation de l'Internet et d'une méta-poétique de l'Internet: ils savent combien la théorie sur ce nouveau média se doit de prendre en compte l'usage des internautes et à quel point le récit s'impose pour rendre intelligible l'ensemble de ces expériences.'

<sup>24</sup>Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, Mass.; London: MIT Press, 1999).

<sup>25</sup>Though, as in the case of Borsuk and Bouse's *Between Page and Screen*, they may play upon the flight from this enclosure towards the digital.

It is for this reason – that ever-looming spectre of the book, which invariably demands an address - that I consider the physical experiences of the textual texture, immersion, and unveiling a more promising consideration in studies of digital literature than rigorously excavating and analysing the underlying codes. I argue that it is the former that allows digital literature to broaden and redefine literary qualities in a confrontational and tangible way, whereas the latter corresponds more to traditional methodologies of close reading, succeeding in approximating digital literatures to their print predecessors through a renewal of approaches adopted for analysis, but ultimately allowing the reading encounter to be subsumed under timeworn postures and the same, ocularcentric hermeneutics that certain works of digital literature seek to constructively undermine.

Paying attention to the physical dimensions of reading digital texts, as I advocate here, requires moving away from a wholly ocularcentric understanding of hermeneutic reading, and the awakening of what Simanowski, as mentioned previously, terms a ‘semiotic body.’<sup>26</sup> The participation of the reader’s body in digital works, as I demonstrate, becomes crucial to a fuller understanding of these works as artistic and literary entities, as well as being the most visible symptom of the redefinition of literary engagement for which these works call.

The final chapters will, in addition to analysing particular digital works, also examine some of the recurrent themes of contemporary digital texts, and in particular the way in which anxieties about and ambivalences towards posthumanism and increasing dependency on technology are addressed. I note the way in which gesture is often mobilised as an illustration of the persistent discontinuities between bodily actions and onscreen events, in strategies that might be considered to fall within the category of the ‘esthétique de la frustration.’ According to Philippe Bootz:

L’esthétique de la frustration consiste à attribuer, dans le projet d’écriture, une valeur sémiotique à l’activité et aux réactions du lecteur. Autrement dit, à considérer que l’activité de lecture elle-même, dans son aspect behavioriste, fait partie du texte.<sup>27</sup>

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<sup>26</sup>Ibid.

<sup>27</sup>Camille Paloque-Bergès, *Poétique des codes sur le réseau informatique* (Paris: Archives contemporaines éditions, 2009), p.39.

I explore this aesthetic and its use in implicating the reader and physical spaces of the reading process in the texts particularly in these later chapters. By contrast to many ‘user-friendly’ works, several writers of digital literature in French, such as Serge Bouchardon and Annie Abrahams, deliberately engage with faulty features and dysfunction in their works, precisely in order to trouble the apparent coextensivity of the human body with new technologies and the illusion of human mastery thereof.<sup>28</sup>

Throughout my discussion, I look back over the past decades since the 1960’s, over the course of which computerised and digital literatures have rapidly evolved, and consider the cumulative repercussions of these works for an anticipatory redefinition or broadened understanding of literary text.

### **Barthes’ De l’œuvre au texte’**

I refer in each chapter to Roland Barthes’ ‘De l’œuvre au texte,’ drawing on these markers offered by Barthes as a way of understanding the texts I analyse here as affirmations of the impossibility of a pure manifestation of either *œuvre* or *texte*. This designation of a space between Work and Text corresponds to the importance I place on the body throughout these chapters, as the demonstration of this space of operation outside of the traditional containment of the work, through both gestures and the simply proportional indicators offered by the body’s presence in space.

Barthes states at the outset of the article, ‘Il serait vain de chercher à départager matériellement les oeuvres des textes.’<sup>29</sup> Rather than assigning distinct, respective materialities, Barthes argues, ‘La différence est la suivante: l’œuvre est un fragment de substance, elle occupe une portion de l’espace des livres (par exemple dans une bibliothèque). Le Texte, lui, est un champ méthodologique.’<sup>30</sup> Already, Barthes’ readers get the sense that it is the text whose materiality is troubled: the Work, by contrast, may be physically located, indeed, as Barthes goes on to suggest, ‘l’œuvre se tient dans la main, le Texte se tient dans le langage...’<sup>31</sup>

While the work connotes the material value, in addition to substance, the production that enshrines the text enclosed, Works also bear the exemplarity resulting

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<sup>28</sup>Cf. French Canadian Gregory Chatonsky’s work, incident.net, which hosts various technological ‘accidents’ and slips, treating these as part of a digital aesthetic. Gregory Chatonsky, *Incident 1994* (1994) <<http://www.incident.net>> [accessed 29 May 2018].

<sup>29</sup>Ibid., p.70.

<sup>30</sup>Ibid., p.70.

<sup>31</sup>Ibid., p.71.

from approval and promotion on the part of cultural institutions. The Text, in its stray, trailing, and shifting form, does not benefit from the same preservation. I later argue that the context of exhibition as a place of display for text allows the worklike status of an 'oeuvre' to be indicated without sacrificing the procedural and unstable qualities that characterise these experimental forms of text.

Returning for now to Barthes, freedom from enclosure and protection as enjoyed by the Barthesian Text, renders the latter, as distinct from the Work, arguably more vulnerable than empowered. Barthes argues, however, for the Text as an entity that thrives beyond limitations of literary value or canonical value: 'De la même façon, le Texte ne s'arrête pas à la (bonne) littérature; il ne peut être pris dans une hiérarchie ni même un simple découpage des genres. Ce qui le constitue est au contraire (ou précisément) sa force de subversion à l'égard des classements anciens.'<sup>32</sup>

While the Work is firmly singular and unified, for Barthes, 'Le Texte est pluriel. Cela ne veut pas dire seulement qu'il a plusieurs sens, mais qu'il accomplit le pluriel même du sens: un pluriel *irréductible* (et non pas seulement acceptable). Le Texte n'est pas coexistence de sens, mais passage, traversée; il ne peut donc relever d'une interprétation, même libérale, mais d'une explosion, d'une dissémination.'<sup>33</sup> The unstable qualities of the Text, then, are twofold, in the sense that not only does the Text take no unified form, unlike the work, but Text is also constantly in motion and embroiled in a process of textuality, rather than representing the process' results.

Towards the end of 'De l'oeuvre au texte,' Barthes moves to the material identity of the work, in terms of its value, as distinct from the physical materiality that has taken precedence: 'L'oeuvre est ordinairement l'objet d'une consommation; je ne fais ici nulle démagogie en me référant à la culture dite de consommation, mais il faut bien reconnaître que c'est aujourd'hui la « qualité » de l'oeuvre (ce qui suppose finalement une appréciation du « goût ») et non de l'opération même de la lecture qui peut faire des différences entre les livres [...] Le Texte [...] décanter l'oeuvre [...] de sa consommation et la recueillir comme jeu, travail, production, pratique.'<sup>34</sup>

Barthes' evocation of the self-effacing, non-linear growth of the Text as engendered by combined reading and writing methods resonates strongly with digital textualities and the terms coined to describe exactly these tasks, 'wreading' and

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<sup>32</sup>Ibid., p.71.

<sup>33</sup>Ibid., p.73.

<sup>34</sup>Ibid., p.75.

‘écriture’: ‘...le Texte demande qu’on essaie d’abolir (ou tout au moins de diminuer) la distance entre l’écriture et la lecture...’<sup>35</sup> I shall bring these concentrations of quality to bear on the textual works I explore hereafter.

### **Terminology and accessibility**

The terminology I adopt in describing the kinds of works and equipment being considered may, due to the expanse of time covered by this discussion and the quick succession of technological advancements that took place during this period, at times appear imprecise, inconsistent or, indeed, anachronistic. The works were, at the outset, most often termed ‘assisted literatures,’ and the references from the 1960s and 1970s tend to accommodate these discussions quite comfortably under the terms ‘écriture assistée par ordinateur’ and ‘lecture assistée par ordinateur.’ It should be noted that in these years, the activities of composition and reading were still very much distinct. I will address the reasons for this divide in the first two chapters, which discuss these fields respectively and also explain the role of the computer screen in paving the way and providing an interface for interactivity and the collapse of this distinction. These works were followed by forms that called for an increased usage of the term ‘generated literatures,’ although the generated literature paradigm was shortly replaced by the animated literatures of the 1980s, created by poets such as Tibor Papp and Philippe Bootz.<sup>36</sup>

Certainly, the internet has vastly simplified questions relating to accessibility of digital works since the early years of Oulipo, and this has also meant that the field has taken on a more international and enmeshed quality, including linguistically, whereby works from various currents and countries may be easily consulted, read and analysed, regardless of the linguistic or geographical distance of the reader.

Most recently, the field has become characterised by ever more diverse forms of digital work, including installation and performance works, spam literatures, works appearing on blogs, works that form interactive and participatory web platforms, and

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<sup>35</sup>Ibid., p.75.

<sup>36</sup>Bootz suggests a periodization of French digital literatures into the ‘generated’ phase and the animated phase that followed. Since the 2000’s, the rapid diversification of the field has positioned French texts within a more international context (ELC anthologies for example), and the genres and forms made possible render a definition of the period by a single paradigm impossible. Philippe Bootz, *From Oulipo to Transitoire Observable* (2012) <[http://www.dichtung-digital.org/2012/41/bootz/bootz.htm#\\_ednref1](http://www.dichtung-digital.org/2012/41/bootz/bootz.htm#_ednref1)> [accessed 6 March 2018].



so on. I explore some of these extremely recent forms in my sixth and final chapter, indicating the importance of the spatial dimension both in the articulation of these works, and as a factor that is due only to increase in importance and the attention accorded to it by creators of digital works.

Digital works are now often encountered by readers in the mosaic-tile formations of online ‘exhibitions’ and anthologies or galleries of works. The anthologisation of digital literatures has been unavoidably internationalised since the internet has become such an accessible and convenient vehicle for makers of digital literature to publish their works. The collections compiled by the Electronic Literature Organisation, for instance, an organisation that produces anthologies of selected digital texts, thus takes the form of a homepage that consists of a juxtaposed offering of thumbnail links, each of which lead to individual works from a range of international digital literature projects and texts.

Indeed, Sandy Baldwin’s statistics have demonstrated that the 2016 Electronic Literature Collection anthology contains 114 works from 26 countries which appear in 13 languages, demonstrating a significant broadening and diversification from the first anthology in 2006, which contained only 6 non-English language works, clumped together under the category of ‘multilingual,’ from a total of 64 works.<sup>37</sup>

Throughout my considerations of, and research on, these works, I have nonetheless encountered many difficulties in accessing works in such a way that would allow me to carry out a close reading or to compose a faithful report of the ‘full,’ immersive experience of the work being explored. Works with installation and performance components, in particular, have proved impossible to visit, having often appeared in the past in the context of ephemeral exhibitions and in remote locations for a limited time, following which the technologies and components that make up the work are dismantled.

Older works, such as those works that were displayed at the *Espaces Interactifs Europe* exhibition in 1996 or at *Les Immatériaux* in 1985, may be found in traces, such as in still images of mobile texts, for example, which are included in the

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<sup>37</sup>Various authors, *Electronic Literature Collection, Vol. 1* (2006) <<http://collection.eliterature.org/1/>> [accessed 6 March 2018].

It is worth noting that ‘country’ does not exist as a filter view option at this point, but rather the reader may search by Author name, keyword, or title of the work.

catalogues of each of these exhibitions.<sup>38</sup> Of course, the observation of a still image represents a very impoverished experience relative to the immersion of those exhibition visitors that witnessed the works at the events themselves.

One cannot help but evoke Florian Cramer's questioning of this bifurcated experience of accessibility to digital works, suggested in Cramer's keynote speech at the 2012 Electronic Literature Organisation conference, in which Cramer referred to both the ease of accessibility for many to works published online, at the same time as site specific and gallery-based works reinforce the slightly more exclusive tone of digital artworks and works of literature as belonging to a kind of 'gated community' or 'digital boutique.'<sup>39</sup>

While exhibitions might then be credited with bringing works of digital art and e-lit to the public, then, we must continue as critics and observers of these modes of creation to ask what kind of public, exactly, is being reached in these cases.

### **The relationship between creation and criticism in France**

Whereas in the early years of discussion that foregrounded practices and theorisation of electronic literature in France, the Oulipo discussed pairings of literary and computing methods over jovial dinners in restaurants or at each others' homes, today digital literature in France is closely connected to universities, with specific departments and labs dedicated to experiments in digital creation.

Many of the French writers and theorists I will discuss in this thesis are currently based in such departments: Serge Bouchardon, for example, is Professor of information and communication sciences at the Université de Technologie de Compiègne.<sup>40</sup> Philippe Bootz is based at Paris 8, where he is also a member of the Laboratoire Paragraphe, an interdisciplinary research laboratory in which five main groups are active. Bootz is involved with the Équipe EHN: 'Écritures et Hypermédiations numériques,' mainly concerned with hypertextuality and the social and cultural impacts of new forms of digital expression.<sup>41</sup>

Marc Veyrat, to whose work I refer in chapter six, as well as working as a

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<sup>38</sup>I discuss these exhibitions here in chapters two and three respectively, in which full details of the publications that issued from these events are given.

<sup>39</sup>Florian Cramer, *Post-Digital Writing* (2012)

<<http://www.electronicbookreview.com/thread/electropoetics/postal>> [accessed 16 March 2018].

<sup>40</sup>Serge Bouchardon (2018) <<http://www.utc.fr/~bouchard/wordpress/>> [accessed 6 March 2018].

<sup>41</sup>Laboratoire Paragraphe (2017) <<http://paragraphe.info/>> [accessed 6 March 2018].

multimedia artist, also is involved in the Department of Hypermedia communication at IAE Savoie-Mont Blanc (Annecy).<sup>42</sup> These dual roles of university teaching and research and creative practice might therefore be viewed as demonstrating a mutual and reciprocal flow of information and ideas between practice and research of digital creation in France – I shall come back to this shortly, demonstrating that in most of these cases quite different courses are being taught and approaches taken to those adopted by these individuals in their own creative processes and experiments.

In other words, a shared expertise underpinning communication technologies and coded literary works does not necessarily mean university students in these departments are being exposed to such a diverse range of usages of the technologies being studied. One might argue, then, that electronic literature criticism in France does not tend to arise as a distinct field; rather there is overlap throughout between practitioners and creators in the French context. Furthermore, these practitioners tend to work in varying capacities at their respective institutions – while Philippe Bootz is involved with the Laboratoire Paragraphe, for instance, and thus experimenting with hypertext in this part of his work, he is also responsible for studies elsewhere at the university, teaching on the ‘Master Professionnel de traduction’ programme, for instance.<sup>43</sup>

The contention that digital literature criticism as a field of study would benefit from more dedicated scholarly collectives, such as that of the Electronic Literature Research Group at the University of Bergen, Norway, or the hypertext groups at Brown University, overseen by George Landow and Robert Coover, might be supported by looking to the departments in which the critics of electronic literature are currently working, and noting that these areas of study are often concerned more with questions of communication or information flow, rather than concentrating specifically on the theorisation and study digital art and literature.<sup>44</sup>

Philippe Bootz, Serge Bouchardon and Alexandra Saemmer, to name but three examples, all write critically on electronic literatures, as well as being active in

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<sup>42</sup>Marc Veyrat CV (2012) <<http://labs.hyper-media.eu/marc-veyrat.html>> [accessed 6 March 2018].

<sup>43</sup>Paris 8, *Master Professionnel de Traduction: Philippe Bootz* (2017) <[https://master-t3l.univ-paris8.fr/article.php3?id\\_article=22](https://master-t3l.univ-paris8.fr/article.php3?id_article=22)> [accessed 6 March 2018].

<sup>44</sup>*Electronic Literature Research Group, University of Bergen* (2018) <<http://www.uib.no/en/rg/electronicliterature>> [accessed 6 March 2018].  
George Landow, *Hypertext at Brown* (date unavailable) <<http://www.cyberartsweb.org/cpace/ht/HTatBrown/BrownHT.html>> [accessed 6 March 2018].

composing these kinds of works. This simultaneity of creation and criticism in the French context, however, does not seem to affect the transferability of the works created in France into international anthology and exhibition contexts: in other words, dual roles of makers and critics has not led to the kinds of limitations one might expect.<sup>45</sup>

I shall try nonetheless to distribute my attention to criticism in these chapters, allocating importance to criticism or elucidation provided by the writers themselves where this proves helpful, but also drawing on the ideas and critical models and terms of critics from outside of the French context – Espen Aarseth and N. Katherine Hayles, for example, in order to examine how these might be applied. French works do not usually tend to appear in these works of these critics, though, as I demonstrate here, the linking of ideas between these critical modes and the kinds of French creation that prevail today may be made with relative ease, and similar tropes and ideas are at work in the texts of Malbreil and Bouchardon to those examined elsewhere by Hayles et al.<sup>46</sup>

Whereas there are several examples of specific critics outside of the French context dedicated to digital literature as an object of study, probably the most famous example being the already cited N. Katherine Hayles, critics in French institutions seem to experience a line that is drawn between the creative application of their skills in the context in their practice and in their university teaching and work these are subjected to multiple, versatile uses and are channeled into something that more closely resembles communication technology studies, engaging with issues such as information management, rather than linking these new digital creative currents with the tradition of literary scholarship.

In the United States, scholars such as Jessica Pressman are developing theories that address the linking of and affinities between new digital literatures and past print schools and currents.<sup>47</sup> No critics that I have encountered in my research have applied such strategies of linkage and cross-comparison to the French literary tradition, interrogating how contemporary and older digital literatures from France engage with

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<sup>45</sup>See Alexandra Saemmer's 2011 text, 'Böhmische Dörfer,' for example, which is included in the 2016 anthology, *Electronic Literature Collection*, vol. 3. Alexandra Saemmer, *Böhmische Dörfer* (2016) <<http://collection.eliterature.org/3/work.html?work=bohmsche-dorfer>> [accessed 6 March 2018].

<sup>46</sup>Hayles does briefly mention Bootz and Alamo in *Electronic Literature*, pp.18-19.

<sup>47</sup>Jessica Pressman, *Digital Modernism: Making it new in new media* (New York: Oxford University Press, 2014).

it. I hope to offer some *pistes* for such study here.

To offer some notes towards a conclusion on the observations laid out above, the digital works I have discussed in the later chapters manifest a notable detachment from any specifically French literary heritage and do not seem to understand themselves as at all positioned to rewrite and reinvent literary traditions, rather they happen to use writing as one of their modes of creation and it tends to support an idea that is also communicated through other vehicles and schemes of the multimedia works.

My reading of this, as I argue in the sixth chapter, is that such a position is deliberate, rather than representing a naive or evasive relation to the literary past, and benefits from a reading that takes these as articulations of the ripeness of literary practice for reconception and reimagining, most specifically in terms of a relocation of value or a rethinking of how value is attributed in relation to perceived artistic quality or that of literariness.

The kind of backward glance maintained by the Oulipo, then, in creating hybrid forms such as the ‘Rimbaudelaire,’ to which I shall return, appear very quaint when compared with these more autonomous and detached modes of expression and artistic interrogation, albeit a necessary traversal of territories as the first claims were made for a combination of the forms and modalities of literary creation and computing.

It follows from the fact that digital literary criticism does not seem to extend in France too far beyond authors’ presentations and comments on their own works and those of their fellow creators, that scholarship linking parts of the tradition in a chronological fashion as I have done here is somewhat rare and obscure. Criticism written in English that deals as extensively with the French context, characterising the field of digital literature through divergences and commonalities, and the social, economic, and cultural conditions from which these have arisen, has not appeared until now.

Further, no single work exists, to my knowledge, in which the most recent years of French electronic literature and criticism have been addressed in terms of a systematic exposure of the key terms and the phenomena they designate (the ‘*esthétique de la frustration*,’ the ‘procedural model,’ Bootz’ ‘functional point of view’), but rather recent works and forms have been analyzed as they appear in

individual works, signaling the presence of these influences in dedicated criticism.<sup>48</sup>

One major reason for the absence of such a work, I suspect, would be the overwhelming porosity of digital artistic practices, and the range and volume of works being produced today, each with highly specific aesthetics that are best understood in relation to the relevant maker or collective, rather than being reductively associated with an overarching aesthetic current. Another factor would be the sparseness of a distinct critical tradition that deals with these works, as I have suggested above. Be this as it may, I hope that the chapters that follow shall provide some rich insights into the role of the computer in French literary experimentation across the decades since 1960.

Perhaps, finally, it will become clear that these works have engaged in deliberately fragmented and rebellious discourses of creation precisely because grouping together towards a homogeneous identity for digital literatures is so contrary to the promises of the latter as taken up by many of the creators I discuss here. This being the case, I hope to sift some of these works and follow some of the clues and common features that allow the reader a glimpse of their projects and engagements, only to re-release these into their dispersed trajectories of unraveling and irreducible text.

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<sup>48</sup>Philippe Bootz, 'The Functional Point of View: New Artistic Forms for Programmed Literary Works,' *Leonardo*, 32.4 (1999), 307-316.

**Part One:** A Materialist Reading of the Evolution of French Digital  
Texts

## Chapter One

### ‘Des machines qui travaillent pour nous’: Revisiting the Origins of French Digital Texts<sup>49</sup>

#### Introduction

For many contemporary critics, the experiments of the French Oulipo group represent some of the earliest forays into the creation of computerised literatures, and these experiments are therefore often obliquely evoked as the ancestors of present-day digital literatures.<sup>50</sup> The relationship of these precursors to the works found online today, however, is rarely explored beyond the consideration of the different elements presented in terms of the content of these works, often neglecting the composition process and how it anticipated the subsequent, corresponding *mode d'emploi*.

Indeed, though the Oulipo were among the first writers in France to speak of the possibilities of a literature ‘assisted’ by computers, it is necessary, I argue, to revisit the nature of the literature envisaged and the context in which these visions were constructed in order to better understand the factors that were to shape the evolution of the literatures that followed, and which led to the profusion of Francophone online texts easily available to readers today.

I shall demonstrate that much from the Oulipo’s discussions of the 1960’s, in particular, adumbrated the gradual development of digital literatures. There are many aspects of these earlier works and experiments, however, which were soon replaced by features whose creation was favoured by the kinds of technological options that became available shortly afterwards. In my exploration of these early discussions, I

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<sup>49</sup>Raymond Queneau, *Entretiens avec Georges Charbonnier* (Paris: Gallimard, 1962), p.151:

‘Naturellement, il faudrait qu’on ait des machines qui travaillent pour nous.’

<sup>50</sup>Alain Vuillemin, *Informatique et Littérature (1950-1990)* (Paris; Geneva: Champion-Slatkine, 1990). Bootz, 2012.

Sarah Sloane, *Digital Fictions: Storytelling in a Material World* (Stamford, Conn.: Ablex, 2000).

Alexandra Saemmer, *Matières textuelles sur support numérique* (Saint Étienne: Publications de l’Université Saint-Étienne, 2007).

Marc Lapprand, *Poétique de l’Oulipo* (Amsterdam: Rodopi, 1998).

Lapprand describes later research into virtual literary forms as ‘...para-oulipiennes, puisque elles se situent de plain-pied dans le virtuel, ou le potentiel’ and also highlights these forms’ affinities with oulipian projects insofar as both represent ‘des procédés, des modes de fabrication...’, Lapprand, *Poétique*, p.63.



shall distinguish, furthermore, between certain ideas expressed by members of the group that simply represented unfulfilled scope for experimental innovation of a literary nature, and which could retrospectively be considered as precocious conceptions of literary-technological applications, and the actual uses that the Oulipo expressly envisaged for the 'literature machine'.<sup>51</sup>

Though later digital literatures came to adopt many of the former, it is important to recognise that it was too early, in terms of the equipment available, for the Oulipo to be formulating these ideas specifically in relation to the promise of a computer-based solution. I therefore argue that material considerations, particularly considerations of the changes in computing equipment available over the past six decades, are crucial to analysing and understanding the kinds of literatures that have emerged since the 1960's, as well as the related, social and technical situations to which these works were responding.

These considerations encompass both pragmatic factors, such as the accessibility of technology and the contexts in which computers might typically be encountered by the general public, as well as more conceptual factors, such as the perception of the computer as it was constructed in the public imaginary more generally, the latter factor being a crucial clue to the kind of reception that computer-assisted literatures were to meet, and indeed which would later on become a vital part of the aesthetics of e-literatures.

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<sup>51</sup>The translation into English of Italo Calvino's essay collection *Una pietra sopra*, which contains 'Cibernetica e fantasmi,' was given the title 'The Literature Machine,' to reflect these ideas Calvino was developing from the late 1960s onwards about the promises of assisted literatures. Italo Calvino, *The Literature Machine*, trans. by Patrick Creagh (London: Picador, 1989). It might be noted that in some cases, rather than looking insistently forwards, the Oulipo also looked back at historical projects that shared a similar spirit to their own (these were referred to by the group as 'plagiaires par anticipation.') In the case of the 'Baisers de Kuhlmann,' for instance, the group sought out the machine as a lacuna in literary history, and indeed this occasional gap perceived in older works was one of the ways in which the Oulipo justified recourse to a literary machine. The machine was felt by the group as a 'trace' – a present absence – in some elements of literary history, and it sought to revisit these with the technology of the late 60's and early 70's. Oulipo, *Atlas de Littérature Potentielle* (Paris: Gallimard, 1981), pp.304-05. Indeed, there exist instances in which the Oulipo unwittingly anticipated approaches to digital literature, which would only come to fruition much later, and these may be distinguished from actual contributions such as those of Noël Arnaud and François le Lionnais to developing methodologies for exhaustive text generation. Though they were not completed on a computer, for example, Noël Arnaud's *Poèmes Algol*, published in 1964, attempted to convey what the result of exhaustive literary application of a restricted vocabulary might be: and in this sense, perfectly foresaw how the process of text generation was to unfold over the years that followed, and thus represented a knowing contribution by the group to the elaboration of literary computing practices.

I shall also demonstrate through this materialist reading how some of the early Oulipo's conceptions of literary forms or ideas may be retrospectively situated as precursors to later digital forms, proceeding to demonstrate, however, that a linear, consequential and direct understanding of these attributions would be reductive and anachronistic. In fact, and as my exploration of the considerations of computing equipment demonstrate, it was not only in relation to later resources in computing that the virtual counterparts of these ideas could be realised, and indeed the Oulipo were most likely contemplating these innovations in terms of form more generally, rather than specifically anticipating technological manipulations. A somewhat materialist reading of the conditions in which these theories and experiments were elaborated once again proves helpful in distinguishing these.

Finally, I will signal several aspects of the Oulipo's practices of the 1960s and 1970s that detached the group's operations somewhat from the main literary culture. I will suggest that this early pursuit of computerised literatures at a remove from literary critics and publishers was the beginning of what would evolve as a liminal art form, which operated as a distinct entity from the print literary tradition and welcomed influences from the visual and plastic arts, as well as music. I will later discuss the position of digital literatures in the years that followed, in order to emphasise how digital literatures in France continue to occupy and thrive in this intermediary position between literary and plastic arts.

### **The Foundation of the Oulipo and discussions of the machine**

The Oulipo, or *Ouvroir de Littérature Potentielle*, was founded by François le Lionnais and Raymond Queneau in 1960, as a workshop dedicated to the interdisciplinary study of literary potential, through constraint-based structural innovations. For several years, the Oulipo meetings would form the main site for the discussion of machine-assisted literature in France, starting from the early exchanges of the group and continuing up until the foundation of the Alamo (*Atelier de Littérature Assistée par la Mathématique et les Ordinateurs*) by the oulipians Paul Braffort, Jacques Roubaud and Marcel Bénabou in 1981.

The creation of the Alamo marked the definitive separation of computer-related discussions from the Oulipo's activities, and indeed Philippe Bootz considers it to be only with the creation of the Alamo that the field of digital literature was truly

established in France.<sup>52</sup> Indeed, the announcement of the centrality of assisted literatures in the name of the Alamo saw what was only ever discussed as a sustained curiosity, one area of interest among many, by the Oulipo, take a more authoritative role in the endeavours of the Alamo.

It would, however, be wasteful to disregard these earlier conversations and minor experiments of the 1960's and 1970's, as they shed considerable light on the obstacles faced by the members of the Oulipo in attempting to contribute to the constitution of the field of assisted literature, as well as demonstrating the promises perceived by the oulipians in these endeavours. The Oulipo was deeply engaged with combinatoric and permutational modes of composition, and accordingly its members adopted an envisioning of the 'literary machine' as a tool for combining great quantities of words at a high speed, producing a multitude of fully exploited possible combinations, ultimately presenting varied and numerous texts that would represent a rigorous exploitation of the source material.

The ideas first developed by the Oulipo thus foregrounded the work that would later be formalised by the Alamo, insofar as it was an approach very much aligned with the oulipians' discussions of the function and interest of literary automation that would dictate the methodology of and projects undertaken by the Alamo. Moreover, as there was an oulipian presence at the centre of the Alamo, in its founding members, many of the Alamo's *littéraciels* – programmes for the generation of literary texts – were closely based on oulipian constraints and previous or partially developed experiments in literary computing.<sup>53</sup>

It may be noted both in examining the Oulipo's early projects, and also in observing the continuations of these by the Alamo, that the kinds of texts being created were hardly experimental in the radical sense, but more in terms of the degree of technical innovation required for their production. The texts in fact drew on literary tradition and pre-existing canonical texts, incorporating the computer as a tool for establishing structural moulds or templates (often created by 'emptying' the vocabularies of existing poems) and implementing permutations based on these using

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<sup>52</sup>Philippe Bootz, MOOC, 'Poésie Numérique: la naissance d'un champ,' Module 3.

<sup>53</sup>An example thereof being the *littéraciels* CAVF, based on Queneau's *Conte à Votre Façon*, presented on the Alamo's website. Alamo, *CAVF* (2002)

<<http://www.alamo.free.fr/pmwiki.php?n=Logiciels.Litteraciels>> [accessed 6 March 2018].

Similarly, the programmes written for Bénabou's alexandrines and the 'Baisers de Kuhlmann' were carried over from much earlier oulipian discussions.

selected lexical groups, thus producing works that were strictly governed by metrical and syntactical constraints.<sup>54</sup>

This approach may be seen as aligned both with the Oulipo's rejection of aleatory methods of composition, instead favouring rigid structures that would allow for the emergence of a 'clinamen,' or spark of disobedience or rebellion in the overall order of the literary system, and with the contemporary conception of the computer as a 'machine à calculer,' that had yet to be complemented by developed visualisation hardware.

As I will shortly discuss, early attempts at the creation of computer-assisted literature could not presume or incorporate the presence of computing equipment as sites at readers' disposal for the consultation of texts created: indeed, during the 1960's and 1970's even the writers themselves struggled to gain access to these 'machines électroniques.' It was only under exceptional circumstances, such as exhibitions, that readers could experience assisted literary works on the actual machines that had facilitated their composition.<sup>55</sup>

The confinement of the computer's presence to the composition stages in the majority of cases, then, I argue, served to influence the kinds of text that were produced in these years and the way in which these were considered by the writers who orchestrated their composition. The mechanical dimension of the aesthetic of these works was one which thus revolved around the elliptic presence of computing processes, which at once allowed the writers greater freedom to present this cryptic intervention as they wished, and yet also restricted the amount of identifiable reference that could be made to the equipment in light of its general obscurity for the reading public.

I will describe, in the chapters that follow, how the increased availability of computers from the 1980s onwards allowed for the engendering of a self-referential tendency in the works created thereafter, whereby these works would take up various

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<sup>54</sup>See, for example, the 'Rimbaudelaïres' presented by the Alamo at the *Les Immatériaux* exhibition at the Centre Pompidou in 1985. The program takes the structure of Rimbaud's sonnet 'Le Dormeur du Val,' and proceeds by overlaying Rimbaud's syntax with Baudelaire's lexicon. Though the results are created by a novel process of text generation, they are nonetheless carefully maintained within the syntactical and lexical parameters of the French poetic tradition. ELMCIP, *Rimbaudelaïres* (1985) <<http://elmcip.net/creative-work/rimbaudelaïres>> [accessed 6 March 2018]. Paul Fournel also describes the programme written for Marcel Bénabou's 'aphorismes artificiels,' as a similar process of template creation in his 'Ordinateur et écrivain: L'Expérience du Centre Pompidou,' in the *Atlas*, p.301.

<sup>55</sup>At the Europalia Festival, for example, which took place in Belgium in 1975.

themes familiar to computer users as part of their constituting features, exploring these in parallel with the display of textual elements. It was not only an issue of access to equipment, however, and indeed the kind of equipment that existed at this point is worth bearing in mind.

During these years before 1980, a perception of the computer very different to that which is commonly held today dominated, whereby it was considered more a calculation and data processing device than one associated with visualisation. It was only once the computer screen developed sufficiently in order to accommodate a certain quantity of information, and display this with a satisfactory standard of comfort and detail, that the possibilities of the computer as a tool for providing entertainment began to be explored.<sup>56</sup>

Furthermore, the computer screens of the 1970s had a monochrome display and required a rather large text size to allow for clear reading, which limited the amount of text that could be displayed. It is likely that these restrictions represented a further reason for the Oulipo's confinement to employing the computer for combinatorics or the automated implementation of constraints, and their association of the computer with composition only, given its hitherto restricted possibilities for reading.

Indeed, it might be observed that the Alamo were to continue in the combinatoric or generative style thereafter, in the work completed from 1981 onwards that consisted mostly of generating texts and displaying these statically, even though the screens of the time offered greater possibilities. If this is so it may be the case that the models built by the early Oulipo endured as a strong influence on the Alamo's

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<sup>56</sup>Alain Vuillemin underscores the changes brought about by the development of the computer screen. Alain Vuillemin, *Littérature, Informatique, Lecture* (Limoges: Presses universitaires de Limoges, 1999) and Alain Vuillemin, 'Littérature et Informatique: De la Poésie électronique aux Romans interactifs,' *La Revue de l'EPI*, 94 (1999) <<http://www.epi.asso.fr/revue/94/b94p051.htm>> [accessed 6 March 2018].

Lev Manovich discusses this evolution of the computer's identity: 'During its history, the identity of a digital computer kept changing almost every decade: a calculator (the 1940s); a real-time control mechanism; a data processor; a symbol processor; and, in the 1990s, media distribution machine.' Manovich correctly emphasises that 'This latest identity has very little to do with the original one, since the distribution of media does not require much computation.'

Lev Manovich, *Avant-garde as Software* (1999) <[https://www.academia.edu/542747/Avant-garde\\_as\\_Software](https://www.academia.edu/542747/Avant-garde_as_Software)> [accessed 6 March 2018].

Marie-Laure Ryan also notes that 'the use of the computer as an entertainment and artistic machine came relatively late in its evolution.' Marie-Laure Ryan, *Between Play and Politics: Dysfunctionality in Digital Art* (2010) <<http://www.electronicbookreview.com/thread/imagenarrative/diegetic>> [accessed 6 March 2018].

projects, and though the screen offered new potential for dynamic and animated literatures, it would take some time for the methodologies that generated such forms to be elaborated.<sup>57</sup>

It may be argued that the way in which the Oulipo conceived of the ‘literary machine’ saw its members approach the computer as a replacement for the author, representing a more efficient way of sorting through possible narrative sequences, lexical choices and so forth. Later this emphasis would shift, from the initial understanding of the computer as a new authorial ‘electronic brain’ to one that mobilised the computer as a new instrument for the facilitation of interactive reading.

This perception of the computer as a replacement for the human author is clear in Italo Calvino’s 1967 article, ‘Cibernetica e fantasmi’.<sup>58</sup> The breakdown of the author’s role as a more functional one, a craft consisting of the knowing assembly of various parts, helped to assimilate the authorial enterprise to the tasks that the Oulipo imagined as imminently delegated to the machine: these ideas are most extensively demonstrated by Jacques Duchateau’s presentation on the Oulipo and its aims, which was made at Cerisy in 1966.<sup>59</sup>

The presentation appears in the Archives de l’Oulipo as an annex to Memorandum no.36, and apparently was untitled, as the text is simply headed ‘Communication de Jacques Duchateau sur l’Oulipo à Cerisy.’ In light of the impossibility of a more immediate language of experience, in which ‘un pur sanglot serait un pur chef d’oeuvre,’ it must be accepted, Duchateau argues, that language is but a conventional system which takes into account through particular organisational possibilities the details of a given experience or situation.

Artifice is therefore an inherent factor of any language. Duchateau proposes that nobody would contest this fact, but indeed plenty take issue with its consequences: ‘une sorte de spontanéité, d’ingénuité dans le mécanisme de la création, s’en trouve atteint.’ He continues to describe the author as one who should know ‘toutes les ficelles de son métier,’ and thereafter likens the author’s work to the

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<sup>57</sup>Bootz groups the Alamo and Oulipo as belonging to a first phase of static text generation, after which animated and kinetic texts began to replace this initial paradigm. I shall return to these questions of periodization at the end of this chapter. Philippe Bootz, ‘From Oulipo to Transitoire Observable.’

<sup>58</sup>Italo Calvino, ‘Cibernetica e fantasmi,’ in *Una pietra sopra: discorsi di letteratura e società* (Milan: Mondadori, 1995), pp.208-217.

<sup>59</sup>Archives de l’Oulipo, Annex to Memorandum no.36, ‘Communication de Jacques Duchateau sur l’Oulipo à Cerisy’.

untangling of cables. If, Duchateau argues, all literature contains artificial components, and these artificial components may be automated, are we then to conclude that literature in its turn may be automated as well? Indeed, these technical approximations stemmed from an analogy that was quite understandably drawn at a time when the computer was still essentially an industrial instrument, rather than the more naturalised household appliance it was to become within a few years, with the advent of the personal computer.

Though many hobbyists and researchers had access to computing systems during the 1970's, it was still not conceivable that the general public might adopt the computer as a device on which to read, and particularly not as a device allowing for the leisurely consultation of literary works.<sup>60</sup> The computer was therefore not at this point really conceived of as a potential successor to the print text, ie. as a site of reading for 'ordinary' readers.

Though the Oulipo's early presentations saw the group revise ideas of authorship in favour of a reimagining of the hitherto-romanticised author as a humble craftsman, knowingly assembling his materials, this is where the newly physical understanding of literary practice appears to end for the group. Arguably, the kinds of templates created by the group for permutational variations allowed for compositional operations whereby every part was slotted back into its correct place. Though this corresponds to the group's mechanical reinterpretations of authorial language, the final result demonstrates a kind of opacity in its unity and resemblance to traditional works that does not allow for the traces of these processes to be revealed.

Later computer-based literatures, as I will show, explore new and more explicitly physical modes of relating to the letters and components of texts, however these only come to fruition in the wake of an understanding of the computer as an interactive device, and the reader's role facing the computer as an 'écrivain' or 'wreader'.<sup>61</sup> It was thus much too early, and computers were far too difficult to access for lay users, for writers to begin reinscribing the physical forms of the computer with

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<sup>60</sup>Ceruzzi explores the beginnings of personal computing in the 1970's. Paul E. Ceruzzi, *A History of Modern Computing* (Cambridge, Mass; London: MIT Press, 2003).

<sup>61</sup>The concept of *écrivain* was introduced in Pedro Barbosa in his thesis in 1992, which was later published, Pedro Barbosa, *A Ciberliteratura: Criação Literária e Computador* (Lisbon: Cosmos, 1996).

The use of 'wreader' to describe the combined activities of reading and writing was suggested in George Landow, *Hypertext* (Baltimore; London: Johns Hopkins University Press, 1992).

literary gestures, a practice that would later be taken up by writers such as Serge Bouchardon, and which I will discuss more extensively in a later chapter of this thesis.

Before this rethinking of the computer itself as a literary instrument could be undertaken, readers needed to be introduced to modes of reading in which they were the ones producing visible responses to the text, remodelling the literary source based on their personal, interactive reading. The possibilities for leaving some kind of mechanical aesthetic imprint, that which N Katherine Hayles would later term ‘the mark of the digital,’ did not yet represent dimensions that would have been relevant or identifiable to those for whom the texts were created, in the sense that readers of the print result of assisted literary experiments would not have recognised these allusions, being as they were still largely unfamiliar with the appearance and operation of computers.<sup>62</sup>

The Oulipo’s concern for formal rigour and distaste for the aleatory meant that the chance-driven components of their experiments were restricted to lexical choices and juxtapositions in texts that were otherwise neatly aligned. The group did not have any interest in producing ‘experimental’ literatures in any sense other than that of this pioneering adoption of technology for the fulfilment of regular compositional tasks, and they were displeased to have their activities compared to those of Marc Saporta, whose *Composition no.1* had been published in 1962 by Seuil, consisting of 150 loose, unbound, single-sided and unnumbered pages that were to be shuffled and read in whatever order the reader chose.

The group disapproved of the loose and aleatory nature of Saporta’s work, with Jacques Bens arguing that ‘Il s’agit donc plus d’une “décomposition” qu’une “composition”’.<sup>63</sup> The fragmentary nature of Saporta’s text was the opposite of what the Oulipo hoped to achieve by employing the machine: a tirelessly achieved ream of continuous work, leaving nothing to chance and containing no careless repetitions of content. Saporta’s work was later to be acknowledged as one of the most important print precursors of hypertext, in terms of its mobile and divided structure.<sup>64</sup>

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<sup>62</sup> Hayles, *Electronic Literature*, pp.159-86.

<sup>63</sup> Archives de l’Oulipo, Memorandum no.23, 2 July 1962. Annex 1.

<sup>64</sup> Jay David Bolter, *Writing Space: Computers, Hypertext and the Remediation of Print* (Mahwah, N.J.: Erlbaum, 2001), refers to Saporta’s work as a ‘bridge to the electronic medium’ and ‘emblematic of the late age of print,’ p.150, later referring to *Composition no.1* as a forerunner of hyperfiction in particular, p.151.



The endlessness of hypertext, however, its frequent lack of an identifiable ending, and the encouragement for the reader to continue navigating through the text until such a point as they are too tired to continue, resonates with the Oulipo's enthusiasm for the tireless executions of the machine, and the possibility of producing volumes of work unthinkable for a human author.

Later technologies would allow digital literatures to peel away from the restrictions imposed by the lack of alternatives to conventional print form and evolve as visual and tactile forms, often with sophisticated dimensional qualities that bypassed the two-dimensionality of the printed page. It remains unclear, however, in light of this reluctance to experiment with material form, as opposed to syntactic or metrical elements, whether, had such possibilities been accessible to the Oulipo, the group would have taken advantage thereof.

### **Queneau's *Cent mille milliards de poèmes* and *Conte à votre façon*: Between print and remediation**

In my introduction to this chapter I mentioned that, looking back over some of the Oulipo's discussions, certain conceptions of potential literary forms appear remarkably precocious, and could almost be thought to anticipate later forms that would be realised on electronic devices. In light of the understanding of the computer as a simpler and more analytical device, as I have underscored above, an understanding that dominated prior to the screen's transformation of computers into tools for media diffusion, it seems more likely that the Oulipo were imagining outstanding and unexplored routes for literary form in general, as opposed to future projects anchored specifically or exclusively in the emerging field of literary computing.

The co-founders of the Oulipo, Raymond Queneau and François le Lionnais, were particularly inventive in this respect. I have suggested so far that the Oulipo in its early years envisaged the computer as a compositional machine that would perform conventional literary tasks, enforcing strict, classical literary structures upon a wide range of source material to produce results that manifested themselves as standard print forms.

Though this was the case for those projects specifically conceived for transformation into literary programs, the way in which Queneau, in particular,

conceived of arborescent and mobile literary forms adumbrated the multifarious structures and labyrinthine qualities that would come to characterise later digital texts, ultimately drawing these out of the codex form and engendering an experimental approach to the spatialization of literary experience.

The relation of Queneau's works to later literary computing is interesting, however, as his *Cent mille milliards de poèmes*, a book of permutational sonnets published in 1961, and the *Conte à votre façon*, a model for an arborescent work, are both frequently evoked in discussions of early programmed literature, yet both were programmed retrospectively, the sonnets by Dmitri Starynkevitch, and the *Conte* by Dominique Bourget.<sup>65</sup>

In light of this, the original compositions should also be recognised as self-sufficient works in themselves, and the programmed versions as remediations thereof.<sup>66</sup> Arguably, then, Queneau's works did not necessarily call for this kind of technological bolstering, but rather also demonstrated their own self-sufficiency as textual devices through the clever structural features of the print versions.<sup>67</sup> Marc Lapprand argues in *Poétique de l'Oulipo*:

...que le lecteur compose l'une des combinaisons à l'aide d'une aiguille à tricoter, insérée entre les languettes de la luxueuse édition originale, ou à l'aide d'un logiciel idoine, le résultat sera toujours l'un des sonnets virtuels prévus par Queneau. Là où l'ordinateur se distingue, c'est évidemment dans sa vitesse d'exécution.<sup>68</sup>

To be sure, the adaptation of traditional print structures to host the permutational spirit of Queneau's work, as was achieved in Gallimard's intricate publication of the sonnets, also succeeds in drawing the reader's attention to the book as a device for the

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<sup>65</sup>Bourget is referred to in the *Atlas*, p.299. The *Conte* may be read in 'Prose et Combinatoire,' *Atlas*, pp.306-10.

<sup>66</sup>Starynkevitch, an associate at IBM with whom the Oulipo were collaborating at the time, used a CAB 500 computer to program Queneau's sonnets shortly after the appearance of the print work. This experiment is referred to in *Génèse de l'Oulipo* (Le Pré Saint Gervais: Castor Astral, 2006), p. 79. Fonds Oulipo, Memorandum 28 August 1961.

I use the term 'remediation' in the sense given to it by Jay David Bolter and Richard Grusin in *Remediation*.

<sup>67</sup>Queneau's original sonnets were printed on paper in a booklet that could be cut horizontally such that each line of each sonnet could be recombined with any other 13 lines. With 10 poems of 14 lines each, the potential number of poems that could be generated was  $10^{14}$ , ie. 100,000,000,000,000 sonnets!

<sup>68</sup>Lapprand, p.64.

transmission of text and a generative medium. Lapprand's argument would be much less easily made in relation to a contemporary work produced in both print and digital forms, or even a slightly later work of assisted literature than the programmed version of Queneau's sonnets. Of course, the original was, in this case, highly particular and by no means a typical print work, and few comparable books have been created since.

It might be argued that the specificity of the physical form of the work in this instance is accorded as much importance as the specificity of content, the latter a relatively universal and defining characteristic observed in literary works in general, but the former much more rare. I will argue in the chapters that follow that remediation of print works typically entails a reorientation of the nature, use and spirit of the work as it is adapted from one medium to fit the parameters of another.

Of course, this reorientation in some cases is slighter than in others. For instance, perhaps the digitisations of print texts that are prepared with a view to consultation on screen, comparable to scans or photographs of the physical works, demonstrate this kind of near-equivalence between the original and remediated versions, distinguished slightly by the practical features (eg. zoom, annotation possibilities, etc.) offered by the remediated version, but not otherwise exhibiting any particular aesthetic differences resulting from the computer's incorporation – or at least not any that are considered as part of the work itself.

The programmed version of Queneau's sonnets demonstrates the limitations on authors of the 1960s and 1970s in terms of engaging with the 'mark of the digital,' which was in the late sixties still only a subtly visible result of the speed and organisational capacities of the computer in the combinatoric work, rather than the much more visually sophisticated and self-referential aesthetic possibilities that may be observed in the kinds of works I will discuss in the second part of this thesis.<sup>69</sup>

The spirit of this earlier and more elusive, instrumental aesthetic might then have been just as effectively captured in the functional manoeuvring of the 'aiguille à tricoter' as in the printed results of the machine's rigorously executed permutations.<sup>70</sup>

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<sup>69</sup>Again, this term is Hayles'.

<sup>70</sup>In 'Poésie et Combinatoire,' *Atlas*, p.303, Paul Braffort suggests a 'coupe-papier,' a rather less disjunctive instrument than Lapprand's knitting needle. It might be argued that the ludic aspect of the work was somewhat exaggerated in later reception, and Braffort's understanding thereof as a quieter statement, composed of elements closer to the more habitual actions of writing and reading, is most likely closer to Queneau's intention for his sonnets – namely, to draw attention precisely through more natural and familiar forms of interactivity, to the reader's role in 'shaping' the work.

Though the speed of the computer's functioning may be a lesser, or in some cases entirely negligible, consideration in today's digital works, in the late 1960's operational factors such as this may be seen as central to an aesthetic that sought to engage, by means of imitation, with accelerating technological development and the repercussions of automation for traditionally human endeavours such as the composition of literature.

It is worth remembering that at this time the computer was still often understood as a 'cerveau électronique,' whereas later it would be understood as a tool for the execution of commands provided by a human user, through the mediation of translations supplied to the machine by a program.<sup>71</sup> The kinetic and animated aesthetics that developed later thus correspond to more recent understandings of computing equipment as media, rather than autonomous creators, with inherent possibilities to be manipulated by the human artist or writer, and digital texts as pieces of art and entertainment.

The earlier understanding of the computer, by contrast, largely influenced by parallel developments in artificial intelligence, saw the computer as a means to independently complete tasks such as composition at an infinitely faster rate than the human, a vision that began to change with the addition of improved screens in the 1980s, which helped to orientate the reception of computer-assisted texts towards more active modes, interactivity and dialogue or collaboration between the human user and the machine, through screen-generated modes of textual experience that rendered simultaneous the processes of composition and reading.

Queneau's sensibility for the arborescent or mobile work was quite singular, and was not really shared by the other members of the Oulipo, who were much less inclined towards formal inventiveness beyond the syntactic level of the text, concentrating none of their verve for structural constraints on revisions of the text's outward form.

The programming of Queneau's sonnets, it is worth noting, saw a further, subtle shift in their remediation (aside from the computer's speed, mentioned by Lapprand) from the ludic, physical navigation of the print work to a more interactive

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<sup>71</sup>Valérie Beaudouin, *Calvino et la machine* (2015) <<http://oulipo.net/fr/calvino-et-la-machine>> [accessed 16 March 2018].

In this article, Beaudouin refers to the 'cerveaux électroniques' discussed by Calvino in *Cibernetica e fantasmî*.

mode of engagement that was highly innovative for its time, whereby unique sonnets would be generated based on the readers' typing of their names on the computer keyboard, and the time at which the generation of the sonnet was occurring.

The program could be consulted at public presentations made by the Oulipo, using computers lent to the group for these occasions by IBM, and the possibility of private readings of such texts was still very remote.<sup>72</sup> The work is furthermore notable insofar as it demonstrates Queneau's alertness to the instrumentality of form, in addition to the instrumentality of language, as well as the interrelations between the two. It might be argued, on the other hand, that the experiments of the other members of the Oulipo in the years that followed remained firmly confined to language, which tended to be presented in traditional forms.

### **The Imaginings of François Le Lionnais**

While Queneau's ideas, demonstrated through specific print texts, thus lent themselves to rather immediate adaption into programmable forms, the ideas of the Oulipo's other co-founder, François le Lionnais, often identified literary potential that was less accessible, and which engaged with notions of potential forms *per se*, rather than the literary potential that was to be released through combinatoric or interactive modes of reading.

The precocious imaginings of Le Lionnais, who questioned various established facets of the literary work, such as the two-dimensional formats in which text was at this time still typically presented, represented an initial approach to issues that would later be taken up by digital artists and writers.

Le Lionnais, then, in addition to engagement with the oulipian concern with formal invention on the level of metrical and literal arrangement of text, also demonstrated an interest in presenting texts on a scale that would challenge their confinement to the book form, suggesting in one case the creation of large, sculptural versions of Queneau's *Conte à votre façon* and *Cent mille milliards de poèmes* for an exhibition of the Oulipo's works.

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<sup>72</sup>In October 1969, for example, the Oulipo partook in a 3-day event sponsored by the publisher Temps mêlés, at which they presented various projects. On the 4 October, under Le Lionnais's guidance and with the help of IBM Belgium, visitors were offered the chance to play the 'Jeu des trois alertes petits pois,' a programmed version of Queneau's arborescent text also known as the 'Conte à votre façon.'

In 1975, as Le Lionnais was considering possibilities for the Oulipo's presentation at the Europalia festival in Brussels, he suggests in a letter to Blaise Gautier, who was director of the CNAC at the time, that certain texts by Queneau could be created in the form of interactive installations, that would allow the visitors to the exhibition to read oversized versions of Queneau's works. Le Lionnais imagines that the print format of Queneau's *Cent mille milliards de poèmes*, for example, could be replicated, 'sur des feuilles (bois? plastique? autre matériau?) de la grandeur d'une porte.'<sup>73</sup> With its fringed pages rendered as giant strips that hinge from a structure such as a doorframe, the sculpture imagined by Le Lionnais would augment the mobile format of the print work.

More wildly, Le Lionnais also suggests that Queneau's *Conte à votre façon*, a 'choose your own adventure' story, could be created as an immense labyrinth, 'chaque couloir comportant – inscrit sur un mur – le texte correspondant et débouchant sur un carrefour où sont inscrites les propositions de choix des couloirs.'<sup>74</sup> The readers would thus navigate the branches of the text, physically turning at each junction in the direction of the choices proposed by the author. These ideas of Le Lionnais' could be read as conveying an eagerness to develop parallel display environments and interactive modes of engagement for experimental literary forms such as to allow these to be apprehended in a very physical way, through an embodied reading in which the reader becomes aware of the role of their body, as a literalisation of readerly autonomy, choice and implication.

These sensations could not have been created given the limits of technologies of the time, but they anticipate the kinds of functions incorporated in virtual reality environments, such as the CAVE simulator at Brown University, which began to be used as a tool for the creation and reading of hypertext fictions in 2002, or the kinds of features that are created to immerse the reader of digital texts in the works, such as the use of webcams to capture the reader within animated texts, as is the case in Serge Bouchardon's *Déprise*, among many others.<sup>75</sup>

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<sup>73</sup>Fonds Oulipo, June 1975, Letter from François le Lionnais to Blaise Gautier, dated 20 May 1975.

<sup>74</sup>Ibid.

<sup>75</sup>The use of the CAVE simulator for creative writing was begun in 2002, with Robert Coover's first workshop dedicated to the development of writing practices that would exploit the visualisation and immersion possibilities offered by the space. *Cave Writing* (date and author unknown) <<http://cavewriting.sourceforge.net/workshop.html>> [accessed 6 March 2018].

It is interesting to consider these ideas of Le Lionnais', then, rather than as the unlikely detection of experiences that would shortly be created by computing technologies, as both a solution to the challenge of presenting literature in the context of exhibitions, events traditionally reserved for plastic and visual art forms, and as a new physical format imagined for the development of embodied literary experience.

I will later return to the idea of literature as an art form to be exhibited, arguing that digital literature in France developed affinities with visual and plastic arts such that e-literatures were more often exhibited alongside other kinds of interactive artworks than they were discussed, say, in literary magazines or reviews.<sup>76</sup> An illustration of this coexistence of digital text installations and artworks may be found in the next chapter, in my discussion of the *Espaces Interactives Europe* exhibition, which took place at the Pavillon de Bercy in 1996.

Le Lionnais' fascination with an immersive structure that draws text away from the flat, enclosed form of the book therefore demonstrates an experimental approach to textual interactivity and spatiality that would only come to full fruition much later, once computing equipment began to take on more flexible forms, which lent themselves to the constitution of immersive and interactive experiences, and with whose rearrangement artists and writers were more comfortable. The reader would later experience reading while surrounded by the text in the context of installations that made use of multiple screens and projectors.<sup>77</sup>

It is interesting, moreover, to recognise the idea of textual immersion as one that was conceptually explored in a pre-digital spirit, insofar as this allows for a broader understanding of immersion and interactivity as notions that were considered promising by creators of literature, prior to such experiences being offered by emergent technologies.

Indeed, noting this recognised possibility of ascribing a physical form to what would later be considered as an experience proper to the virtual realm is telling of a

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<sup>76</sup>This question of exhibiting literature is also discussed in Bouchardon's article 'Digital Literature in France': "Why is the field of plastic arts so interested in digital arts and why does it seem to be able to value them," Bouchardon writes, "while we do not notice the same interest concerning the literary field and digital literature?" "Part of the answer," he suggests "may lie in the fact that the experimental works of the digital arts can be shown, displayed; it is much more difficult to present the experimental works of digital literature in a museum or in an exhibition." For Bouchardon, this difficulty of exhibiting digital literature accounts for the latter's difficulties in 'being recognised by the literary field.'

<sup>77</sup>As in the case of Jean Pierre Balpe and Maurice Benayoun's 'Labylogue,' for example.

Jean Pierre Balpe and Maurice Benayoun, *Labylogue* (2000)  
<<http://www.benayoun.com/Labylogb.html>> [accessed 6 March 2018].

physical dimension that is common to the two, and which negates the argument that the digital equivalent should be considered an immaterial kind of immersion. Instead, what emerges from such a comparison is that the embodied experience is one that is mostly dependent on the reader's own physical engagement, and somewhat less on the textual forms that engender it. Comparing the embodied mode of literary and aesthetic experience sought by these two very different kinds of realisation, it might be argued that both mobile or screen-based textualities and sculptural versions of textuality are material renderings that are apprehended by way of the body's relation to their intricacies, with the only substantial difference between the forms discussed being that of scale.

Le Lionnais' anticipation of immersive and embodied modes of reading, then, though not specifically conceived in relation to the computer as a tool for engendering these, was nonetheless a very acute perception of one major change that would distinguish the literatures that would follow; and so the interest of these suggestions is not the potential they represented for projects to be undertaken directly, but rather their demonstration of the general timeliness of formal questions to which technological possibilities for text creation and display would later respond.

The installation ideas proposed by Le Lionnais were ultimately not adopted for the Europalia festival, and instead Queneau's works were demonstrated as printed results of computer-assisted composition.<sup>78</sup> Le Lionnais' suggestions nonetheless reveal his perception that experimental literature might best be appreciated through a kind of ludic and embodied interaction that mimics the formal interruptions to linear reading on a physical level.

Other instances exist in which Le Lionnais' dissatisfaction with the limits of two-dimensional literary forms is evident, and, again, though he does not explicitly imply that computing technology shall provide a solution, these thoughts may be read as a contemporary frustration with formal restrictions, to which technological renderings of textuality would later represent a viable solution.

In *La littérature potentielle*, for example, there is a section dedicated to rough ideas, 'Boîte à idées,' in which Le Lionnais is the author of each entry.<sup>79</sup> In one section, 'Holopoèmes,' Le Lionnais writes about the possibility of an aerial poetry,

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<sup>78</sup>Vuillemin, *Informatique et Littérature*, p.222.

<sup>79</sup>*Oulipo: La Littérature Potentielle (Créations, Re-créations, Récréations)* (Paris: Gallimard, 1973).



poetic works that are suspended in space, and whose readers could reveal hidden or illegible letters with movements of the head, as when examining a hologram image.<sup>80</sup>

Several years later, from 1983 onwards, the American artist Eduardo Kac began to create works of holopoetry, continuing until 1993 and experimenting with different materials. While the first of Kac's holopoems were mounted on materials such as wood and plexiglass, and were viewed by white light transmission, some of these were later remade incorporating a computer (this is the case for the poem 'Oco,' which was first created in 1985 as a white light reflection hologram and remade in 1989 as a computer holographic stereogram.)<sup>81</sup> Describing his works in *Media Poetry: An International Anthology*, Kac writes, 'I wanted to develop an immaterial poetry for the information age; that is, poetry native to the new cultural environment of digital global networks, with its dynamic data flux and distributed communication systems.'<sup>82</sup>

As with Le Lionnais' imaginings of holopoetry, as I will shortly indicate, Kac describes a form that would respond to the potential offered by technologies available. The difference in Kac's case, however, is the much greater sense of connectivity and relevance or enmeshment of the form in the workings of everyday life, as part of a network that touches upon many other aspects of communication and transmission, and the implied potential of a poetry that would respond to such a sprawling and pervasive environment.

Kac's discussion also allows for a more nuanced understanding of the directions that attempts to free the word by departing from the printed page may take. Of holopoetry, Kac writes: 'In holopoetry, immateriality refers to the fact that the verbal elements are organised in a space made of diffracted light, and not on any tangible or concrete form, such as the printed page.'<sup>83</sup>

Le Lionnais also strove towards this light-infused mode of representation in his imagining of *holopoèmes*, and conversely towards a more robust or opaque mode of depicting verbal material in the sculptural route, an approach that might by contrast be seen to augment the materiality of the printed word, drawing attention to the

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<sup>80</sup>François Le Lionnais, 'Holopoèmes' in *La Littérature Potentielle*, p.286.

<sup>81</sup>Eduardo Kac, *Holopoems* (date unknown) <<http://www.ekac.org/allholopoems.html>> [accessed 6 March 2018].

<sup>82</sup>Eduardo Kac, 'From ASCII to Cyberspace: A Trajectory in Digital Poetry,' in *The New Media Reader*, ed. by Nick Montfort and Noah Wardrip-Fruin (Cambridge, Mass.: MIT Press, 2007), p.45.

<sup>83</sup>*The New Media Reader*, p.129.

substantial qualities of its constituent symbols by reinforcing their reception as material entities.

While the two ideas for liberating literal material from the flattened page might then both be seen as engaging with a certain physicality of the written word, they should not be subsumed under a generalised tendency towards textual plasticity, perceived as relatively homogeneous. Indeed, the hologram is notable for the ambiguity by which it is defined, and the sculptural word for its weighted assertion and apparent singularity of meaning.

Emerging much later on, in 2012, Amaranth Borsuk and Brad Bouse's work of augmented reality poetry, *Between Page and Screen*, represents a further step in exploring the possibilities of aerial and projected typography.<sup>84</sup> Using a webcam and corresponding software to decipher the geometric codes of a 16-page print book that the reader 'reads' by holding it up to the camera, experiencing a kinetic and dimensionally complex text that encircles their own onscreen image as they attempt to make out the various formations of letters.

These kinds of experiments with unleashed textuality are significant not only for the ludic modifications to traditional modes of reading that they invite the reader to perform, but also since they demonstrate the mere beginning of engagement with literary components in a manner that addresses the physical potential of these, and challenges the established, opaque and flattened materiality of the printed word. Along with this introduction of physical reading experiences and embodied modes of interpretation of the text, there is a parallel scope for criticism of the text that may also be expressed through the body, which deviates from the obedient modes choreographed by the texts and thus demonstrates the limits of a symbiotic understanding of the reader-text relationship.

Dimensionality, and not only that of the surfaces used for reading, but also of individual letters also represented a largely unexploited area up until the last years of the twentieth century, restricted to two-dimensional forms such as the calligram, which gave the illusion of a three dimensional text.<sup>85</sup> The entry of the computer into the field of literature, and the fact that the operations of literary production and

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<sup>84</sup>Amaranth Borsuk and Brad Bouse, *Between Page and Screen*.

<sup>85</sup>The calligram has since been adopted in its mobile, animated version by makers of kinetic texts, as Alexandra Saemmer and Monique Maza note in *E-formes: Écritures visuelles sur support numériques, Vol. 1* (Saint-Étienne: Publications de l'Université de Saint-Étienne, 2008), p.156.

display were consequently prepared to occur through hitherto unexplored channels, represented a promising development in this regard and prompted writers to contemplate the two dimensions of the printed page as a previously unchallenged restriction that could shortly be overcome.

Le Lionnais recorded his imaginings of a three-dimensional literature, unsurprisingly published in the same section as his description of holopoetry. Notably, and understandably, Le Lionnais does not identify the computer or its associated equipment as potential instruments for the introduction of a further dimension to texts, and such an understanding of its possibilities had yet to come. He instead imagines this experience to be facilitated by special glasses: in ‘Textes anaglyphiques,’ Le Lionnais writes:

Les textes littéraires sont toujours planaires (et même généralement linéaires), c’est-à-dire disposés sur une feuille de papier. On pourrait faire des textes dont les lignes se situeraient dans un espace à trois dimensions. Leur lecture exigerait des lunettes spéciales (un verre rouge et un verre vert) selon le procédé des anaglyphes qui a déjà été utilisé pour représenter des figures de géométrie et des scènes figuratives dans l’espace.<sup>86</sup>

Though I have chosen these examples in particular to demonstrate Le Lionnais’ interest in experimenting with the material dimensions of literature, it should be indicated that these more abstract ideas are not representative of Le Lionnais’ approach overall. Indeed, the latter was responsible for the organisation of many conferences, such as the decade de Cerisy and the Conférence de Liège, as well as meeting regularly with potential industrial collaborators from companies such as IBM and Bull.

More specifically, Le Lionnais was alert to and engaged with questions of computing hardware, and its various implications for assisted literature. The programme of the decade de Cerisy opens on these very questions, as Le Lionnais puts forward the subjects for Robert Faure, Y. Malgrange and H. Leroy to discuss: ‘Qu’est-ce qu’une machine à calculer électroniques, comment apparaît-elle physiquement, quels sont ses organes, comment fonctionnent-ils, comment

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<sup>86</sup>Ibid., p.285.

coordonnent-ils leurs activités? Qu'est-ce qu'un programme, qu'est-ce qu'un organigramme, comment « parle »-t-on aux machines?»<sup>87</sup>

As I have suggested earlier, though Le Lionnais' ideas of holopoetry and literary installations were not conceived to be rendered using computing technology, the situation of these questions as adjacent to the early experiments in computer-generated literatures helps to distinguish the approach of an end to the 'natural' course of experimental literary interrogation as prior to the negotiations of the possibilities of early literary computing, and show how the latter eventually presented routes to return to these questions of dimensionality and materiality that could not have been as compellingly realised in print forms.

### **The Oulipo and the French Literary Establishment**

The fact that the early Oulipo developed its combinatoric ideas somewhat apart from the main contemporary literary culture is significant in terms of the group's contribution to the constitution of the field of assisted literature. The Oulipo members demonstrated much interest in other art forms, such as the plastic arts and sound art, but the notions and methodologies that supported multimedia literary works were not yet ripe, nor were the machines that would demonstrate these works effectively.

The Oulipo throughout the 1960s and 1970s experienced the disinterest of, and a rather evident detachment from, French literary circles with regard to the mechanical aspects of its endeavour, and indeed many of the examples of assisted creation from which the group drew its inspiration came from the fields of permutational visual art or algorithmic music.<sup>88</sup> To some degree, this detachment from the literary establishment was a deliberate part of the group's approach – and the fact that it did not strive to produce full works but rather 'échantillons,' that would

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<sup>87</sup>Fonds Oulipo, Bibliothèque de l'Arsenal.

<sup>88</sup>In the Oulipo's meeting notes from November 1963, Queneau underscores the disinterest of the French literary establishment in the work of the Oulipo, but he implies that it is in scientific research and linguistics or translation circles, rather than in the fields of music or visual arts, that the group's work finds the most sympathetic reception:

'Je signale que si l'Oulipo n'a aucun écho dans les milieux littéraires français (cf. Jean Guérin dans la NRF: 'sordide ennui') – ce que nous n'avons d'ailleurs pas cherché – les travaux ont trouvé un accueil chaleureux et très intéressé dans tous les milieux scientifiques (linguistique quantitative, machines à calculer, traduction automatique, etc.) et à l'étranger (notamment en Allemagne où il existe un groupe analogue).' Fonds Oulipo, Bibliothèque de l'Arsenal.

serve as precedents and templates for future writers emptied their projects somewhat of content for critical appreciation.<sup>89</sup>

The Oulipo was, of course, aware of literary movements elsewhere in Europe, such as Max Bense's Stuttgarter Schule, and while the group admired the successful manipulation of literary texts by Bense's group, the Oulipo nonetheless felt its nascent ambitions for assisted creation as a rather different kind of enterprise.<sup>90</sup> The interest of the Oulipo in the work of Abraham Moles, for example, proves in retrospect to have been a harbinger of the plastic, visual and multimedia affinities that were to prove essential to the development of computer-assisted literatures.<sup>91</sup>

While this detachment from print literary culture allowed assisted literatures to develop under rather free and interdisciplinary conditions, this also had the unfortunate effect that assisted projects of a literary nature failed to assert themselves as a particular strand of the computer-assisted arts, and tended rather to appear latched on to the more prominent fields of assisted music and the visual arts. This failure of assisted literature to mark out a distinct domain for itself was also due, indeed, to a shortage of practitioners.

The evidence suggests that, even by the end of the 1970's, assisted literary composition remained quite marginalised in France, and the field of assisted creation remained dominated by discussions and examples from either music or the visual arts. The Archives de l'Oulipo, for example, contain a booklet consisting of articles that formed the material of a course of lectures attended by François Le Lionnais in 1978 on the subject of 'Arts et informatique' at the Institut de Recherche de l'Informatique et d'Automatique.<sup>92</sup>

The material in the booklet is divided into two firmly categorised, but complementary sections: 'Composition musicale' and 'Création visuelle'. There seems to be no allusion to computer-assisted literatures in either the overall presentation of the course or in the materials. The musical and visual sides are

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<sup>89</sup>François le Lionnais, meeting notes of March 1964 'Néanmoins, je voudrais bien insister sur le fait que nous ne sommes pas une école littéraire. Nous n'avons pas, l'Oulipo n'a pas, à écrire d'œuvres. Des échantillons suffisent.' Fonds Oulipo, Bibliothèque de l'Arsenal.

<sup>90</sup>It should be noted, however, that this was not because the members of the OuLiPo wanted to dissociate themselves from literature: if anything, the aleatory quality of Bense's experiments did not represent a literariness as tight as that which the Oulipo wished to generate.

<sup>91</sup>Moles was one of the first theorists to explore the relationship between aesthetics and information theory, publishing *Art et ordinateur* in 1971. Abraham Moles, *Art et Ordinateur* (Paris: Blusson, 1990).

<sup>92</sup>Fonds Oulipo, Bibliothèque de l'Arsenal.

represented by eminent figures in these domains, Pierre Barbaud, Iannis Xénakis and Pierre Demarne.

It seems that discussions surrounding assisted literatures by the end of the 1970's were still varied, fragmentary and did not engage as great an audience as the application of technologies to other art forms. I consider this early split from the main literary culture to have foregrounded a certain freedom for digital literatures that is quite particular in the French case – it may be observed that in the US, much closer contact between print and digital traditions was maintained. I shall return to some of these questions in the next chapter, in which I shall discuss some of the effects of publishers on the diffusion and perception of digital literatures in France and internationally.

### **Approaches to periodization of the evolution of computer-assisted literatures**

As I will suggest over the course of these chapters, material considerations offer a helpful set of indicators that may be fruitfully applied to understanding the progressive evolution of assisted literatures towards more kinetic, animated forms. It may be argued, then, as I do here, that digital literatures in many respects grew to inhabit the equipment that was available to present them, a consideration that is often forgotten in revisitations of earlier works.<sup>93</sup>

From the above and the initial explorations detailed in this chapter, I have derived this proposition of a periodization of French computerised literatures based on material evolutions, which allows for digital works to be considered also in terms of the technological context of their composition. Alain Vuillemin, in his analysis of the development of French electronic literatures in 'Littérature et informatique: De la poésie électronique aux Romans Interactifs,' indicates as a pivotal moment in the development of French e-literatures the year 1980, when literature, in addition to

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<sup>93</sup>A comparable and much more recent response has been noted by Philippe Bootz to the emergence of tactile mobile devices, which have encouraged the development of haptic literatures and textual or animation features that make use of the touchscreen with which these devices are equipped. Source: Philippe Bootz, MOOC, 'Poésie Numérique: la naissance d'un champ,' Module 3.

As the online project 'Les Technologies Tactiles' proves, however, touch-screen technologies are not as recent a development as might be assumed, but the adoption thereof for the purposes of entertainment depended on their widespread availability, as well as other factors such as portability, and so tactile literatures only came to fruition with the adoption of touchscreen mobile phones and tablets as multipurpose tools used for communication and organisational tasks, as well as for reading. Author unknown, *Les Technologies Tactiles* (2009)

<[http://www-igm.univ-mlv.fr/~dr/XPOSE2008/Les%20technologies%20tactiles/histo\\_origine.html](http://www-igm.univ-mlv.fr/~dr/XPOSE2008/Les%20technologies%20tactiles/histo_origine.html)> [accessed 1 June 2018].

continuing to exist in the form of that which is read, became blurred with text, that which is ‘affiché...sur les écrans d’ordinateurs.’<sup>94</sup>

This apparently sudden visibility of computer-assisted literatures as such, Vuillemin argues, has somewhat upstaged the development of computer-assisted composition and reading methods that preceded the emergence of onscreen literatures. Despite the importance of the preliminary experiments undertaken prior to 1980, it was the requirement of the computer post-1980 for the discovery, exploration and appreciation of the works created that asserted the existence of a literature whose nature was distinctly new. Whereas earlier computer-assisted works had been successfully programmed and created in computerised forms, as was the case with the works exhibited by the Oulipo in 1975 and 1977, for example, it was necessary on account of the difficulty of gaining access to computers to produce these works in equivalent print versions.

On the other hand, after 1980, once computers had become more freely available, the existence of computerised literatures could be more soundly asserted through the creation of works existing only on CD-ROM, for example, which could only be experienced with the computing equipment required to display the work. The reviews *KAOS* and *alire*, which I shall discuss in the next chapter, were distributed on CD-ROM only, with no paper edition, and helped to underscore the inextricability of electronic literatures from the technological devices that contributed to their emergence. The work is furthermore no longer diffused as a finished piece, ready for immediate consultation, but rather ‘Comme en musique, l’« exécution » est devenue inhérente à l’existence de ces œuvres littéraires novatrices.’<sup>95</sup>

The dynamic and procedural approach that foregrounded the creation of generated literatures was thus brought to the fore in animated literatures, which embraced the instability and evolution of the work as an essential part of the textual experience. Whereas the earlier writers, such as the oulipians and Jean Baudot, had no choice but to offer up every possible permutation of the constituents of a single work as a bulky text to its reader, the computer having processed and created these distinct but related versions in advance, the later stages, characterised by animated works,

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<sup>94</sup>Ibid.

<sup>95</sup>Ibid.

allowed for unique texts to be generated as part of a single experience in which an ephemeral variation on the work would be displayed.<sup>96</sup>

The exhibition of Queneau's sonnets at the Europalia festival in Brussels in 1975 or the Journée 'Écrivains, Ordinateurs, Algorithmes,' held at the Centre Pompidou in 1977, whereby a particular sonnet was generated for the exhibition visitor, based on the letters of their name, which were entered on the computer provided for the presentation, somewhat anticipated this selective approach to text generation, indicating a little of the generation process by way of example and shaving off the excess text, albeit more rigidly than the later works would do.<sup>97</sup>

By contrast to these animated works, the contemporary and more recent digital texts that I will discuss in the second part of this thesis show a kind of (often staged) interpretation of this particular approach, whereby the text is ostensibly driven and sculpted by the interactive gestures of the reader. Vuillemin notes in his discussion of the evolution of works from electronic poetry to interactive novels, a perceptual shift in considerations of literature from a contained entity represented by the physical form of the print book, to an 'acte créateur'.<sup>98</sup> While this transformation of the conception of literature is not universally, or even widely, applicable to recent literary works in general, it is certainly the case that the development of electronic literature has traced a trajectory for the expansion of the definition of literature, establishing forms external to the book and directing attention to the gestures of organisation, interaction, editing and gathering of these texts in which the reader of e-literatures is forcibly engaged.

While, therefore, the forms associated with computing technologies are not considered to encapsulate the digital text in an analogous way to the traditional book's encapsulation of the literary work, I will demonstrate over the coming chapters the importance of the physical presence of the computer and its related devices in constituting this new kind of spatial literary experience.

While the earlier phase in the evolution of digital literature, on account of the difficulty of accessing equipment, might be relegated to the status of a preparatory stage of conceptual reconciliation of the distinct fields of literature and informatics,

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<sup>96</sup>Jean A. Baudot, *La Machine à écrire mis en marche et programmée par Jean A. Baudot* (Montréal: Les éditions du jour, 1964).

<sup>97</sup>*Atlas*, p.301.

<sup>98</sup>*Ibid.*



and the later period after 1980 identified as a more practical phase, in which computerised literatures began to appear, in this chapter I am arguing for a revision of this juxtaposition, which takes account of the constitution and availability of computing equipment in each phase, demonstrating that the literatures and experiments produced in each period corresponded more to the material possibilities and climate of each stage than to a specifically chosen and steadily evolving aesthetic or approach.

It is deceptive, for example, to consider the early years as forecasting much later works, insofar as this would suggest an untenable link between the stages prior to and following the development of the screen. It may, rather, be observed that the evolution of these literary forms and methods was rather segmented and discontinuous, and that the theories of each period corresponded rather to the instrumental and aesthetic possibilities that presented themselves at each time, therefore demonstrating how the elaboration of a theory of French digital literature was less of an independent, coherent evolution and more a shifting set of ideas that accompanied and responded to the tools and practices that became available at each stage, as well as the modes of readership these engendered.

## **Conclusion**

As I have argued here, it is important to distinguish between the ideas that preoccupied the Oulipo in its contemplations of literary potential, and the actual approach that was adopted in undertaking preliminary experiments in literary computing. I have shown that, though many of the concerns that were to be taken up later by digital writers and artists occurred to the group in these years, the actual possibilities for the elaboration of a fruitful practice of computer-assisted literature depended overwhelmingly on the nature and availability of the equipment of the time, and there are, accordingly, many aspects of contemporary practice that would have been impossible to foresee at earlier stages.

As I have outlined in this chapter, there are many strands of the early Oulipo's discussions that have been picked up since in later discussions of early digital literature. It is important, however, to identify and distinguish from among these ideas the combinatoric approach that the Oulipo developed with specific consideration of the computer and the possibilities it offered.

This approach, developed in relation to the relatively limited functions offered by the computers of the time, was exhausted at a relatively early stage after a certain number of experiments and consultations with programmers. Among the reasons for this are firstly, and simply, that the conception and manifestation of the computer as a functional entity changed swiftly between the mid-60's and the late 1970's, bringing with it a new set of considerations that had not been previously addressed, and rendering the previous considerations incomplete. It was difficult for the group to keep abreast of the developments in technologies, particularly as its access to machines was rather limited. Though Dmitri Starynkevitch had, in the early 1960's, provided the Oulipo with a simple precursor to the personal computer, computing technology was developing at such a fast rate by this stage that this simple machine would become obsolete shortly after.<sup>99</sup>

Secondly, the way in which computer-assisted literature was to establish itself was not as smooth or imminent as the early works of the Oulipo assumed, with the addition of new hardware such as the colour screen significantly changing the conception of electronic literatures and offering new possibilities and challenges to writers. Generated literatures after 1980 began to find their own aesthetic mostly through experimental interrogations of the media on which they were developed and displayed, a dynamic that was made possible only after the screen had aided the merging of writing and readership and thus engendered a responsive and complex form of human-machine interactivity.

Whereas combinatoric applications of the computer by writers such as the Oulipo members demonstrated the possibility for generating the dense volumes of carefully executed material that had been anticipated in the 1960s, much of this work was highly impoverished from a semantic point of view and demonstrated no novelty in terms of its visual formation.

Moreover, the experience of reading these works did not allow the reader much enjoyment, as they were most often provided with blocks of slightly stilted texts, peppered with subtly different reuses of the same primary material. Even in the case of Queneau's *Conte*, for example, the closest thing to an interactive work at the time, the reader's options were tightly constrained to the pre-established options

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<sup>99</sup>Mark Wolff, *Reading Potential: The Oulipo and the meaning of algorithms* (2007)  
<<http://www.digitalhumanities.org/dhq/vol/1/1/000005/000005.html>> [accessed 29 May 2018].

proposed, and the tone of the work was more of simple storytelling than the complex interrogations of meaning generation and sensory engagement that would later be constructed through more sophisticated interactive texts.

Though the combinatoric approach to assisted literatures developed by the early Oulipo reached its expiry date rather swiftly, these works are far from lost in the present-day electronic literature landscape. In the Electronic Literature Collection vol. 3, for instance, the third online anthology of the Electronic Literature Organization, which was published in February 2016, there are works by two oulipians, Marcel Bénabou (*Dizains*, 1985) and Paul Braffort (*Triolets*, 2014).

It is worth noting that this inclusion shows the continued significance of these works in the French context, if not even more so in international considerations of digital literatures. Both of these works have been finalised somewhat later than the first decades of Oulipo, as the corresponding dates suggest, and indeed probably would be considered the work of the Alamo group, however they are presented very much in terms of the Oulipian tradition – in the editorial statement accompanying Braffort's work, for example, Queneau's sonnets are immediately mentioned – and the debt of these structures to the theories developed in the early years of Oulipo is evident.<sup>100</sup>

The presence of these works in the anthology, alongside contemporary works of digital literature, demonstrates the sort of pending canonical status thereof, valuable for their exhibition of the combinatoric methods that preceded more dynamic animated literatures and multimedia works. It is crucial that this distinction is made, however, as the current presentation of the works alongside more recent texts risks reducing the interpretation of their characteristics to questions of genre or style, suppressing the material context from which they arose.

Such questions of preservation of digital works, in ways that manage at once to make these consultable to a wide range of readers, while at the same time maintains some kind of link to or acknowledgement of the conditions in which these works were produced, are only due to become more pressing over the coming years.<sup>101</sup> More

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<sup>100</sup>Paul Braffort, *Triolets* (2014) <<http://collection.eliterature.org/3/work.html?work=triolets>> [accessed 6 March 2018].

<sup>101</sup>The *Pathfinders* project, created by Stuart Moulthrop and Dene Grigar, concerns itself with these questions of preservation and, inevitably therewith, of canonisation. The project focuses on four English-language works, choosing each for its demonstration of particular features. There exist, by all

recent writers and digital humanists have developed online projects that hark back and pay homage to the experiments of the early Oulipo, to the group's combinatoric models and to the Oulipo's aesthetics of potential and ludic literature more generally.

Millie Niss' and Martha Deed's *Oulipoems* represent a playful take on some poetic methods loosely based on the group's constrained works, and also including audio and animated elements on the website on which they are presented. The works also draw on many references to US politics around the time of their creation in 2004, and so the more topical aspects of these works' nature are evident.

The interactive hotspots in the poem "No War!" activate sound sequences when the reader hovers the mouse over them, clearly representing a much more recently feasible composition technique than those available to the Oulipo. Perhaps the most indebted of the *Oulipoems* to their titular writers is "The Electronic Muse," which rearranges the lexicons of different poets. The combinatoric and 'cooked language' aspects of the work align it very much with the early approach of the Oulipo, though of course the technological presentation options are much more elaborate than those that had been available to the group.<sup>102</sup>

Similarly, the digital humanist Stefan Sinclair has developed an online tool, *Hyperpo*, which offers visitors the chance to read and play with pre-existing texts using procedures inspired by those developed by the Oulipo.<sup>103</sup> The tool, though drawing inspiration from the oulipian *modus operandi*, is ultimately more of an analytical and exploratory resource than one that supplies a basis for new compositions. Furthermore, as is equally the case with Niss' and Deed's *Oulipoems*, its presentation of works explicitly referencing the Oulipo, with insufficient exploration of their relationship to the group's modes of literary creation, and in an online context presenting more recent options for the diffusion of electronic literature, risks an anachronistic implication of the Oulipo's affiliation with the animated literatures that came along later.

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appearances, no analogous projects in France to date. Dene Grigar and Stuart Moulthrop, *Pathfinders* (2017) <<http://dte-wsuv.org/wp/pathfinders/>> [accessed 6 March 2018].

<sup>102</sup>Martha Deed and Millie Niss, *Oulipoems* (2004) <<http://www.sporkworld.org/oulipoems/menu.html>> [accessed 16 March 2018].

See the entry under 'langage cuit' in Marcel Bénabou, *Liste de contraintes oulippiennes* (2017) <<http://oulipo.net/fr/une-liste-de-contraintes-ouliennes>> [accessed 6 March 2018].

<sup>103</sup>Stéfan Sinclair, *Hyperpo: Digital Text Reading Environment* (2006) <<http://web.archive.org/web/20121110191405/http://hyperpo.org/>> [accessed 4 May 2015].

While these projects in some sense keep the spirit of the Oulipo's writings alive, it is also the case that they somewhat evade the question of transmitting with these stylistic elements of homage some hints as to the conditions that shaped these aesthetics, insofar as technological and material factors were concerned. Their status as remediations of earlier texts, therefore, and the updates performed on these works with the aid of previously unavailable features, remains far from evident.<sup>104</sup>

To conclude, I hope to have demonstrated here through considerations of computing equipment and the role thereof in shaping approaches to and the aesthetics of computerised literatures, that valuable distinctions may be made that assist the appreciation of the literariness, on the one hand, and practical constraints or possibilities, on the other, of these works. By demonstrating the distinction of oulipian works conceived in relation to contemporary understandings of the computer's role in enhancements and expansions of the literary field, I have shown how writers engaged with both the freedoms and constraints of their adjacent technologies.

Furthermore, by signalling certain aspects of literary form, such as dimensionality and hologram textures, as imagined by François le Lionnais and Raymond Queneau as prospects of interest for literary potential in general, I have suggested a way of understanding later works, such as Borsuk and Bouse's *Between Page and Screen* and CAVE works such as Wardrup-Fruin's *Screen* as texts that take back up the concerns of late twentieth century writers, using previously unavailable technology to plough on through the creative *cul-de-sac* that had been reached by their literary forebears.<sup>105</sup> I shall return to each of these works in my later chapters.

I hope that by underscoring the presence of curiosity about elements such as literary three-dimensionality and physical immersion as interests that predate the technologies that might deliver these, the assessment of later works displaying such qualities may be revisited, reinstalling a literariness in these, rather than understanding the texts in question as merely serving up certain ludic options in

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<sup>104</sup> 'Oulipoems' and 'Hyperpo' are just two examples of how contemporary digital literary culture is peppered with allusions to the Oulipo. The Swiss workshop *Infolipo* (2014) <<http://www.infolipo.org/index.html>>, [accessed 6 March 2018] founded in October 2014 and dedicated to 'arts et lettres numériques,' and John Cayley's 1995 article, 'MaMoPo by PoLiOu: Machine Modulated Poetry by Potential Literary Outlaws,' published in the *Writing and Computers* Newsletter no.12, in November 1995, are two further examples.

<sup>105</sup> Noah Wardrip-Fruin, *Screen* (2007) <[http://collection.eliterature.org/2/works/wardrip-fruin\\_screen.html](http://collection.eliterature.org/2/works/wardrip-fruin_screen.html)> [accessed 6 March 2018].

uncritical response to the presence of technologies that make these modes of creation available.

Finally, then, this chapter represents an exploration of the Oulipo's early years as a kind of bridge between experiments and contemplations of potential in the print tradition and simultaneous early explorations of the possibilities of the computer. The works of the Oulipo, in retrospective allusions thereto, have tended since to become blurred somewhat between the actual, simple experiments completed, and subsequent remediations of print or proposed works later created as digital literatures and online tributes.

The period of these activities undertaken by the early Oulipo thus represents some of the earliest steps en route to the reconciliation and creation of complementarities between the print and digital traditions, and so the establishment of some of the distinctions that existed between print and the digital at this point of departure aids the reader of digital literatures in understanding these as conditioned to a significant degree by the equipment used for their diffusion.

## Chapter Two: Reading French Digital Texts: Exhibitions and Editions, 1980-2000

### **Introduction**

In the previous chapter, I discussed the early years of French computer-assisted literatures, and the impact of physical and material factors on the development of approaches to composing literatures with the aid of the computer. In this chapter I shall extend this exploration, taking a similar approach in order to demonstrate the corresponding repercussions for understandings of readership of computerised texts. It should become clear over the course of this chapter why composition and readership, as these were performed with the computer until a certain point in time, could be considered, as I have chosen to do in these first two chapters, as relatively distinct and independent processes.

Indeed, before assisted works took on a greater interactive character, this was perhaps the way in which these practices necessarily had to be thought. As I have argued in the previous chapter, the evolution of the computer screen and the increased accessibility of computing equipment both helped to link the productive and analytical acts involved in the decipherment of onscreen information with those of visualisation, reading, interpretation and modification.

With the interactive modes of computer-facing behaviour that this merging of tasks generated, the user/reader was elevated to a higher role of *écrivilecteur*, holding the power to steer and edit the text as they navigated and experienced it.<sup>106</sup> This chapter is made up of two related parts. In the first part I shall explore the kinds of contexts in which the public encounter with computerised literatures first occurred, and from there consider the influence these presentations and the kinds of juxtapositions and associations forged thereby were to have on the reception of these

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<sup>106</sup>Enzo Minarelli, *La voce della poesia: vocoralità del Novecento* (Pasian di Prato (Udine): Campanotto, 2008), p.51 'A livello di scrittura, come informa il gruppo francese di Alire, è già una realtà la trasformazione del lettore in un *écrivilecteur*.'

works, as well as on the perception of their literariness or their relationship to the traditionally conceived literary work.

I will also demonstrate how the contextualisation of computer-assisted and later, animated literatures contributed to both situating and problematising digital texts in relation to the field of literary arts and that of the plastic and visual arts. Finally, I shall try and orientate these considerations in such a way as to better understand the nature and spirit of French digital texts post 2000, suggesting that the historically and deliberately tenuous links of computer-assisted works to a certain interpretation of literary purity are due to a specific, procedural approach, rather than resulting from a kind of disciplinary failure to establish a dedicated space or a distinctly ‘literary’ enclave within the digital arts.

The positioning of computer-assisted texts in the landscape of digital creation has thus only ever represented a fruitful question, rather than a hindrance, and has shifted over time in accordance with the development of digital literatures. The ways in which digital textualities in fact benefit from their separation from print literary conventions should emerge from the discussion in this chapter, insofar as the liminal positions of these textual works relative to the main literary and publishing spheres allow them to critique the restrictions of the latter structures and therefore constitute an open, alternative, and vibrant space for artistic and textual exploration, free of the restrictions ordinarily imposed by disciplinary boundaries.

### **Pre- and post-1980: the development of the screen and subsequent changes to modes of readership**

In the previous chapter I argued that initial, apparent attempts to adhere to and elaborate on the heritage of print literatures, as was the spirit of many of the early Oulipian experiments in combinatoric text generation, may be better understood in terms of, and indeed largely attributed to, the restrictions created by the relatively late development and incorporation of the computer screen as an enhanced visualisation tool in the 1980s.

The addition of a visual interface on which assisted works could be comfortably displayed and read in turn allowed for the computerised text to be better understood in terms of the relevance of its source technology to the production and interpretation of the work. The constant mobility of the literal and visual components,



for example, which could also be more clearly depicted in terms of their responsivity to the reader's physical intervention by clicking or typing, became more apparent on the new screens, which could accommodate a greater concentration of media.

The impact of the development of the computer screen was felt, therefore, not only in terms of the changes this brought to composition and to the aesthetics of texts produced by the work of the author. Indeed, the evolution of the screen also brought with it significant changes to the understanding of computer-based texts by those on the receiving end of these works, and transformed the purpose and appeal of these works from the point of view of readership.

Before the 1980s, a set of practices had existed which fell under the general heading of 'computer-assisted reading', and whose natures roughly corresponded to the initial perceptions of the computer as a calculatory and analytical device, rather than a comfortable and versatile tool that would allow for sustained reading and editing. This approximation of the computer's literary uses to more scientific and empirical activities made perfect sense, it is important to recall, at a time in which the computer was still essentially an exclusively industrial instrument, rather than the staple household appliance it was to become within a few years, with the advent of the personal computer.<sup>107</sup>

Conceptions of computer-assisted reading prior to the 1980s thus corresponded overwhelmingly to an early understanding of the computer as a scientific or industrial tool, rather than an accessible device suited to the private diffusion of various media. Up until the 1980s, then, computer-assisted reading was discussed most frequently as a set of practices consisting of specialised processes by which experts in linguistic analysis would perform statistical tasks, such as 'measuring' the presence of vocabulary from various lexical fields in the literary works being analysed, thereby conducting an approximate reading that evaluates the literary work based on a summary of the information it contains.

The calculatory function of the computer as it was then understood thus informed the development and orientation of assisted reading methods in a similar way to its influence on the initial approaches adopted in the application of computing to composition. The activity of computer-assisted reading, understood in this way,

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<sup>107</sup>Ceruzzi, in *A History of Modern Computing*, explores the beginnings of personal computing in the 1970s.

was therefore still considered to be the preserve of researchers in fields such as linguistics, not least because these were among the individuals who were best positioned for accessing the equipment needed.

Lotaria, one of the protagonists of Italo Calvino's 1979 hypernovel, *Se una notte d'inverno un viaggiatore*, is portrayed as one such researcher, and her zeal for computer-assisted literary criticism is described in quite a parodic fashion, as representing a cold, paradoxically abridged approach to literature.<sup>108</sup> This kind of reading was thus ambivalently conceived as, on the one hand, fiercely modern and promising, and on the other as somewhat reductive and overaccelerated, and so activities such as Lotaria's are juxtaposed by Calvino with descriptions of the quainter habits of more traditional and dedicated readers.

Though, of course, *Se una notte* is a fictional work, it is not difficult to discern the ambivalences and tensions that the novel presents as born out of the climate in which the novel was written, and of the impressions of the writer himself, torn between the meditative practices of literary tradition and the voracious speed and promise of imminent literary experiments. Towards the end of the 1970s, therefore, the computer was still not really considered as a potential successor to the print text, ie. as a site of reading for 'ordinary' readers, and the combination of readership and computing tended to be considered a terse and evasive endeavour, whose interests were far removed from the idea of reading for pleasure.

It is interesting to observe this shift from an earlier understanding of computer-based reading as a compacted experience, revolving around summaries and keywords by means of which the reader would bypass any implied body of text, to later implications of reading on computers, particularly strong in the cases of hypertext works, of experiences that engender labyrinthine and expansive navigations of textual material, and fairly provoke a liberal employment of the adjective 'Borgesian' on the part of many readers and critics.

By the 1980s, however, as computers were becoming more widely available and the public was quickly becoming more familiar with their uses, methods were

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<sup>108</sup>Italo Calvino, *Se una notte d'inverno un viaggiatore* (Turin: Einaudi, 1979).

Jon Usher, 'Calvino and the Computer as Reader/Writer' *The Modern Language Review*, 90.1 (1995), 41-54.

This approach is not entirely outdated, however, and critics such as Franco Moretti, as recently as 2003 with his work, *Distant Reading*, have advocated similar methods of 'reading' literary works in an accelerated fashion through comparison and collation of the data of these.

being developed to accompany a kind of computer-based reading that was not, unlike its predecessors, intended for quantitative linguistic experiments or lexicological analysis, but rather for the purposes of creating a distinct aesthetic experience and simultaneous reflection on the literary functions of new media.

The development of more complex screens during these years also offered possibilities for a more enjoyable reading experience, shifting from the limitations of a grey and functional, industrial aesthetic to something closer to the dynamic experiences created for cinema screens. At the same time as these new possibilities for the arrangement and display of texts were being considered, writers were also beginning to recognise the limits of the combinatoric approach to composition, which had engendered a few subtly different approaches, typically terminating in static print texts, around the mid-1980s, when it was starting to become clear that digital textuality and digital literatures would require theories and modes of criticism that addressed and appreciated these literatures specifically, taking both formal and media-specific considerations into account.<sup>109</sup>

These theories proceeded, in turn, to assist the development of subsequent literatures, providing the possibility to question how a specifically informatics-based conception of literature might appear and what it might aim to achieve. The continued presence of the computer from the initial phase of composition of the work through to the reading stages was a factor that allowed for the considerable dissolution of the distinctions between writing and readership.<sup>110</sup>

This evolution from a staged to a procedural approach to composition was of course greatly facilitated, if not catalysed, by the technological advances made between the mid-1960s and late 1970s and the increased availability of, and familiarity with, computing equipment that accompanied these advances, a situation that had developed dramatically since the emergence of the early machines.

While readers were therefore reasonably familiar with computers in terms of their professional and communicative functions by this stage, the literary relationship

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<sup>109</sup>Jean-Pierre Balpe was a significant actor in this regard, and possibly the greatest contributor to this reorientation of the field. Balpe straddled both phases of combinatoric and animated text generation, as these are defined by Philippe Bootz in his article 'From OULIPO to Transitoire Observable'.

<sup>110</sup>A. Luiz Dos Santos, in 'Writing, reading, wreading' refers to Pedro Barbosa's conception of 'wreading,' introduced in the latter's thesis. A Luiz Dos Santos, *Writing, reading, wreading* (year unknown) <[https://www.academia.edu/11056131/Writing\\_reading\\_wreading](https://www.academia.edu/11056131/Writing_reading_wreading)> [link not available; last accessed 4 June 2018]

to the computer was one that remained to be reinforced and nurtured. Arguably, the computer proper has still not been fully accepted as a device particularly apt for domestic reading, and reading devices are most often encountered as either exhibition pieces that facilitate interactive works or else as solutions to the practical problems associated with print works, such as those of portability and weight, issues to which devices such as e-readers and tablets currently respond. In the case of e-readers, as distinct from computers as these have recently been employed in digital texts, the devices themselves tend not to be allocated any intradiegetic presence in the works, and there are yet to appear examples of self-reflective elements in works adapted for e-readers.

Electronic devices, then, when taken as reading platforms of choice, tend overwhelmingly to be selected by readers for practical, rather than aesthetic, reasons. In the case of exhibitions, the physical and material dimensions of the device used to present the work tend to be actively incorporated as integral elements to the reception of the text and its various facets. By contrast, in the case of e-readers, for instance, the device is typically valued more for its discretion and minimal infringement on the act of reading.

These sorts of distinctions should not be dismissed as minor considerations: indeed, when taken as crucial to the reading of the works under consideration, they serve as helpful factors in analysing and striving to understand the kinds of artistic entities that particular usage of various physical and material forms, sites, and contexts makes possible. I shall return to the particularities of exhibited literature and literary installation pieces later in this chapter.

### **The emergence of the procedural aesthetic**

The theories of digital literature that were progressively developing towards the end of the 1980s revolved around an aesthetic that depended on a certain familiarity with and understanding of the applications of the computer as a multifunctional device, eventually bringing the textures of these other functions to bear on the literary uses of the computer.

Jean Pierre Balpe was a writer of immense importance in the development and exposition of the procedural and dynamic aesthetics of digital texts. Balpe's early work straddles the two major phases in the development of generated literature thus

far and may be accredited with the shaping of the beginning of a much broader and more versatile aesthetic for electronic works.<sup>111</sup>

This aesthetic shift reflected the evolving and ephemeral qualities of digital entities as well as incorporating the physical presence of technological devices as integral parts of the texts and their associated experiences in a much more emphatic way than in the works that had come before.

The formation of the collective *Transitoire Observable*, created in 2003 by Philippe Bootz, Alexandre Gherban and Tibor Papp, was the culmination of this tendency towards greater privileging of the procedural nature of digital works above all other characteristics, insofar as each of the collective's members – including Balpe – had a distinct and personal approach to the creation of electronic literature in terms of form and content, but all of them had in common this overarching consideration of the computing equipment as a functional whole, characterised by many more elements than those displayed on the screen, a constitution that was hence aesthetically adopted, referenced and interrogated by the works themselves.<sup>112</sup>

It may be observed that the initial excitement of the new visual possibilities brought by the development of the screen display gave way to a subsequent move that apparently ranged beyond the screen-centrism that these developments engendered to then take into account the operational factors of the equipment beyond the text displayed. This phase might thus be seen as a kind of reconciliation of the earlier, calculatory phase of the Oulipo's experiments with the animated phase of Bootz, Papp, and others that followed, leading to the kind of spatial and semantic layering that may be observed in digital works created after 2000, whereby it is often the case that the smoothness and continuity of the visual dimension is disrupted deliberately in order to draw attention to the operational underpinnings of the work.<sup>113</sup>

It remains to be questioned, however, to what extent this expansion 'beyond' the visual, ostensibly enacted by the enlargement of the physical dimension of the work, is merely a broadening of the reader's visual span, and a de-centring of the

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<sup>111</sup>In referring to these phases of generated literature, I follow those defined by Bootz in 'From OULIPO to *Transitoire Observable*'.

<sup>112</sup>Bootz, 'From Oulipo to *Transitoire Observable*.'  
*Transitoire Observable* (2006) <<http://transitoireobs.free.fr/to/sommaire.php3>> [accessed 6 March 2018].

<sup>113</sup>In Serge Bouchardon's 2010 text, *Déprise*, for example, the reader is often required to tinker with the keyboard or mouse in an exploratory and interactive attempt to physically push the visible elements of the narrative forwards.

habitual focal point of readership and space of representation: but this is perhaps best carried out on a work-by-work basis.

There certainly exist several cases in which what may at first appear to be a casting off of ocularcentric reading practice is in fact a mobilisation of the usually stable or central focus thereof, thus actually encouraging a more engaged form of ocularcentrism, rather than a kind of reading methodology that supersedes the ocularcentric mode.

The physicality of the print literary work is thus transformed remarkably in the negotiation of its importation into computer forms, with works of digital literature playing on and exploring the kinds of gestural patterns that create associations in computer-facing behaviour, investigating how this might be adapted for the transmission of a literary or narrative idea.

Indeed, these gestures take on a role of increased importance in the case of digital artworks, as they are used to prompt the reader to engage with and question the very constitution and delineation of the work being interpreted. Such boundaries, conversely, are often taken for granted in more established artistic media. I shall return to these discussions later, referring to specific, recent works.

### **Diffusion of electronic works**

To be sure, electronic literatures did not simply pass directly from the first phase of minor, obscure experimentation to their more recent availability on the websites of various creators and groups. In the intervening years, rather, these works passed tentatively through most of the more traditional forms of literary diffusion.

It might be argued that the impact of these manifestations on the literatures themselves was more significant than the impact on the literary and publishing spheres more broadly, in the sense that the works used these forms to broadcast their slight literary affiliations, before moving on from the limitations of enclosed and recorded forms of diffusion.

The creation of the generated literature reviews *alire*, in January 1989, and *KAOS*, in 1990, nonetheless represented an important step in the exploration of possibilities for the diffusion of digital literatures in France, as well as being a significant factor in the shaping of the reception of e-texts. *Alire* was created by the L.A.I.R.E. collective, which was based at the Centre Pompidou, and *KAOS* by the

KAOS company, in which Jean Pierre Balpe played a key role, editing the three issues of the review that appeared on floppy disks between 1991 and 1993.<sup>114</sup>

These two reviews, insofar as they were only made available on floppy disk or CD-ROM, in some respects reinforced the connection between electronic texts and traditional literature, insofar as they made it possible to consult these individually and domestically, in the context of a 'lecture privée,' rather than in the more general context of the kind of collective reading encounter in which many readers first experienced digital texts, at artistic or scientific exhibitions or festivals.<sup>115</sup>

At the time of *alire*'s creation, however, this development was not to be simply received as a sign of the smooth running of one form of literature into another, through a common means of diffusion, but rather as the tangible affirmation of a differentiated 'littérature informatique,' through works which, though capable of inhabiting the traditional literary spaces of reviews and anthologies, have nonetheless been particularly conceived for onscreen reading.<sup>116</sup>

This juxtaposition of works as presented by *alire* and *KAOS* allowed for the particular features emerging from this purposeful and media-conscious mode of creation to be observed across a range of texts. Ultimately, then, *alire* and *KAOS* allowed for an affirmation of *littérature informatique* not solely by demonstrating that the field was sufficiently evolved and varied to draw a range of contributors to such publications, but also by affirming that a dedicated public existed for such texts, who were prepared for and willing to undertake the readership of the works included. As Philippe Bootz explains in 'alire: la rupture': Elle (l'équipe L.A.I.R.E.) affirmait même que ce champ était suffisamment large et mûr, qu'il nécessitait une revue, c'est à dire qu'il possédait des auteurs mais aussi des lecteurs.<sup>117</sup>

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<sup>114</sup>The L.A.I.R.E. (Lecture, Art, Innovation, Recherche, Écriture) collective was formed by Philippe Bootz and Tibor Papp in November 1988. Philippe Bootz, *L.A.I.R.E.* (2000) <<http://motsvoir.free.fr/LAIRE.htm>> [accessed 6 March 2018].

L.A.I.R.E. distinguished itself from groups that might otherwise have been considered its predecessors, namely the Oulipo and Alamo, by focusing primarily on reading, rather than on composition. This heightened attention to the readership stages in turn informed the way in which works were conceived and presented.

Jean-Pierre Balpe, *KAOS 3 – Action Poétique* (1993)

<<http://www.imal.org/fr/resurrection/kaos-3-action-poetique-jean-pierre-balpe>> [accessed 6 March 2018].

<sup>115</sup>Philippe Bootz, *Alire, une expérimentation de poésie informatique en lecture privée* (2000)

<<http://www.serandour.com/articles/bootz-09dec2000.pdf>> [accessed 16 March 2018].

<sup>116</sup>Philippe Bootz, *Alire: la rupture* (2000) <[http://motsvoir.free.fr/alire\\_concepts.htm](http://motsvoir.free.fr/alire_concepts.htm)> [accessed 6 March 2018].

<sup>117</sup>Ibid.

Through this definition, we note the importance of a physical publication as confirmation and enshrinement of literary writing as distinct from other forms of notation or communication, in the latter's implication of both creators who write for a certain kind of reception, and readers who receive the works in a form that bears the mark of selection by a team of editors.

The passage from print to computerized literatures was thus eased by borrowing somewhat from the traditional structures of literary communication, allowing for the recognition, by analogy, of the works selected as pieces of poetry or literature and interpreting their anthologisation as representative of an elevated sample, gleaned from a field otherwise difficult to navigate, both in terms of 'quality' and in terms of the actual accessibility of the works.

The availability of dynamic, generated texts, including animated works by authors such as Tibor Papp and Philippe Bootz, in a format that could be taken home and consulted repeatedly and at the reader's convenience, in turn allowed for readers to contemplate these works in a more considered and in-depth way, by contrast to the ephemeral encounter with the animated text as an exhibition piece, which must also be observed in the company of other visitors.<sup>118</sup>

These 'review' formats thus helped to test the aptitude of the computerised work for a more snug literary model, whereas previously it had mainly occupied the site-specific locations more often associated with the plastic and visual arts and conferences that tended to cover these through their scientific and sociological relevance.<sup>119</sup>

This also assisted the removal of generated literature from its earlier, industrial associations, a change that was nonetheless eased by the increasing availability of computers for personal and home use. I shall continue to discuss these aspects of the developments of the years following 1980 in the next chapters, in which it shall become clear that exposure of the reading public to digital literatures ultimately

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<sup>118</sup>Tibor Papp's animated poem, 'Les très riches heures de l'ordinateur,' for example, was shown at the 'Polyphonix 5' festival at the Centre Pompidou, but the same work was also published in *alire* 1 in January 1989. Kac, *Media Poetry*, p.276.

This makes for an interesting example of a text whose components are unchanged regardless of the kind of readership – private or public – for which it is destined. This was understandably the case for the animated works of the 1980s that preceded later texts, whose greater interactive nuance meant that the actions of the reader and context in which these were to be performed represented a greater consideration and engendered necessary modifications to the work in order to achieve context-specificity.

<sup>119</sup>One obvious example is the Europalia festival, in which the Oulipo participated in 1975.



forked into works incorporated as installations in exhibition spaces and those published on the sites of their specific authors or groups.

Though, as I have already indicated, these reviews were quite short-lived, their existence nonetheless represented a necessary experiment in digital literature's evolution and the search for a fruitful platform through which creators might demonstrate, address and exploit the particular allowances and challenges that accompany such works.

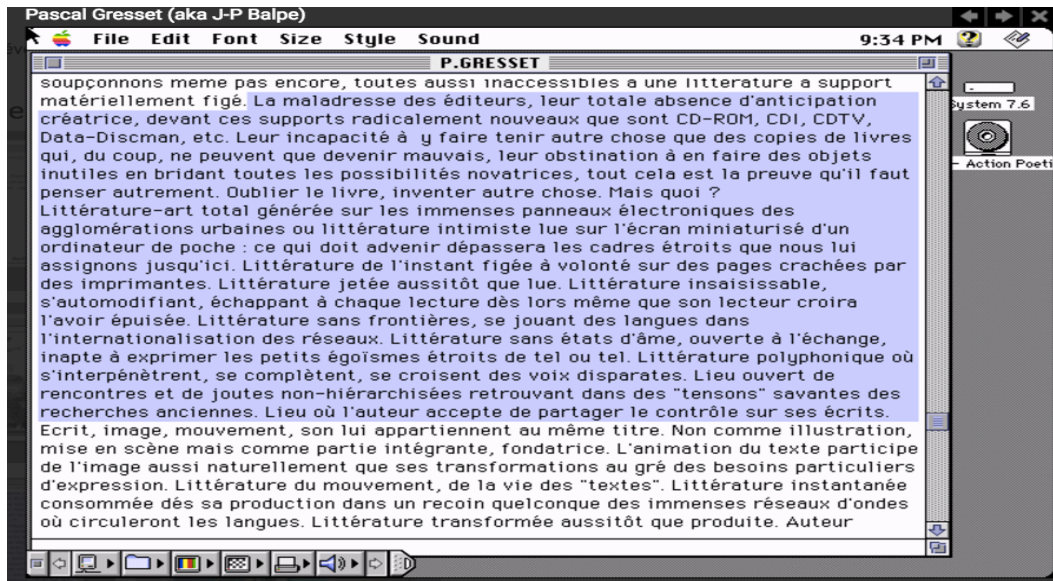
In addition, particularly valuable for gaining some historical perspective on such a young field of creation, these reviews helpfully gathered texts whose juxtaposition forms a collective sense of the spirit and aims of the literatures being created at the time of their publication, before the field diversified further and became, in the case of many practitioners, characterised by an increased interdisciplinarity that saw fewer makers of digital works self-identify as 'poets,' a characterisation which would have been quite widespread during the *alire* years.

It should be emphasised, however, that these reviews and their apparent engagement with traditional print procedures such as editing and anthology formation should not be read as earnest attempts to 'naturalise' digital literatures within the structures of traditional literary practice, but rather as efforts to inscribe these within such forms as markers of scope and potential, and therefore as calls for the development of new modes of presentation and dissemination for these new literatures.

In *KAOS 3*, for example, which was produced in 1993, the following text appeared, authored by Pascal Gresset, one of the many aliases of Jean Pierre Balpe.<sup>120</sup> The text criticizes the absence of inventiveness in publishing, both explicitly as in the excerpt that follows, and implicitly, in *KAOS*' own embodiment of a literary 'other':

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<sup>120</sup>Jean-Pierre Balpe, *KAOS 3 – Action Poétique* (1993) <<http://www.imal.org/fr/resurrection/kaos-3-action-poetique-jean-pierre-balpe>> [accessed 6 March 2018].



Such an address prompts investigation into the slight ways in which electronic awareness was affecting, and was being responded to by, the publishing and editorial organisations of the time. I shall investigate this question in the section that follows.

### **The Role of Publishing in diffusion, canonisation and genre formation**

As I have explained in the previous section, it was not until somewhat later than the mid-1980s that digital works could be easily published on websites for online reading; these platforms were therefore preceded by publications of works on floppy disks and CD-ROMS, which were most frequently produced as a result of the efforts of small and ephemeral organisations, rather than being regularly published by specialised imprints of larger, mainstream publishing houses.

Alain Vuillemin's book, *Littérature, Informatique, Lecture*, allows for a detailed insight into the situation of computer-assisted reading, in terms of the options available to readers and the prevailing experiences of assisted and interactive reading during these earlier years. Vuillemin's work demonstrates that, though a number of French publishing houses specifically dedicated to electronic texts were, in fact, created in the 1990s, these did not necessarily take it as their sole mission to nurture the development of digital born texts, nor did they necessarily concern themselves with identifying and promoting emergent writers of e-literature.

Indeed, the overarching purpose of publishing houses dedicated to electronic works seems to have been conceived rather more conservatively by French publishers

such as Éditions Ilias, particularly when compared to some comparably specialised American publishers such as Eastgate Systems, an example to which I shall shortly return. The difference in approach may be easily discerned according to the kinds of works produced by each company: most of the electronic ‘products’ created by publishing companies, such as Éditions Ilias, for example, often consisted of electronic versions of pre-existing texts, taken from the print canon and elaborated as enhanced versions on floppy disks.

(Re)presenting the works in these formats allowed for the inclusion of linguistic and thematic notes on the works.<sup>121</sup> In 1992, for example, the fables of La Fontaine were among the first eight titles in Éditions Ilias’ new collection, “Les classiques de la littérature”. These ‘electronic’ works were therefore enriched versions of classical or canonical works of literature that benefited from electronic remediation, insofar as it was possible to include annotations and incorporate more paratextual dimensions, as opposed to works that had specifically been conceived for reading and experiencing through electronic media.

However, these works were created along with Ilias editions’ ‘Generation’ collection created in 1997, which made a number of early digital texts available, such as François Coulon’s *20% d’amour en plus* and Jean-Marie Lafaille’s *Fragments d’une histoire*, which had first appeared in issue 8 of *alire*.<sup>122</sup> Arguably, then, the parallel development of remediated, canonical works with works of a more innovative nature, though necessary to make the activities of electronic publishers sustainable, to some extent blunted the impact of the latter and led to some of the confusion that still exists regarding the kinds of works denoted by terms such as ‘littérature numérique.’

Works published in *alire*, such as the animated texts of Tibor Papp and Philippe Bootz, though these focus most of the representative charge of the text on the screen, the aesthetic of these animated works is far from the practical concerns of easing reading, and instead these works tend to take as integral and prominent features

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<sup>121</sup>Vuillemin, p.7; p.106.

<sup>122</sup>Vuillemin, *Lecture*, p.11.

Vuillemin’s article also describes the ‘Generation’ collection produced by Ilias, as well as the rather telling detail that Ilias was, in fact, founded by Jean Pierre Balpe. Alain Vuillemin, *Littérature et Informatique: De la poésie électronique aux romans interactifs* (1999)

<<http://www.epi.asso.fr/revue/94/b94p051.htm>> [accessed 6 March 2018].

Ilias’ ‘Generation’ collection included floppy disk versions of Balpe’s *La Tentation de Tantale* (1994), Zana’s *Paysages sans Ombre* (1994) and Étienne’s *Descendue d’un Village* (1994), and thus supported emerging animated literatures.

the scope for and occurrence of internal glitches and the need for active operation of the equipment on which the text is configured and displayed.

It may thus be seen how the cohabitation of such works alongside electronic, annotated classics was not an easy one, and so exhibition spaces in which the work could be presented with accompanying information for its interpretation, use, and simply the understanding thereof as a procedural experience more than a linear, hermeneutic undertaking were favoured by creators.

Another example of an enhanced canonical work created in electronic format was the 1995 text, *François Rabelais. Electro-Chroniques*, by Marie-Luce Demonet and Etienne Brunet for the publisher “Temps qui courent,” a work that offered statistical readings of Rabelais’ texts based on elements such as word repetitions.<sup>123</sup>

In the elaboration of such remediations, the conception of the computer’s role by these publishers remained entirely functional and subservient, insofar as the electronic version was created to facilitate the interpretation and enhance the understanding of and engagement with the original text, rather than also being utilised as a tool beyond the text displayed, yet also constituted of aesthetic considerations and representative potential. The spirit of canonical remediation and the direct digitisation of print works, as I have suggested earlier, stands in contrast to the operation of American e-literature publishers such as Eastgate Systems Inc., founded in 1982 and which started to publish hypertexts in 1987.

Eastgate is specifically dedicated to publishing hypertext work and deliberately fostered, and continues to publish, emergent e-lit works, as opposed to electronic remediations of works drawn from the print canon, thereby contributing to the creation of a space that enshrines these ‘digital born’ works with the mark of selection and editorial approval from which edited print works benefit. This is, of course, not to say that remediated versions of pre-existing texts were not produced elsewhere and by other editors, but rather that the exclusivity of purpose and specialisation of Eastgate and the impact this had on the promotion of hypertext as a genre of e-literature is notable.

As a result of Eastgate’s dedication to publishing hypertext and signalling works ‘of merit’ the gradual formation of a hypertext canon has been suggested, in which there may be found ‘classic,’ earlier works such as Jackson’s ‘Patchwork Girl,’

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<sup>123</sup>Vuillemin, p.108.

which was written in 1995, and which Eastgate continue to produce alongside a catalogue of newer works.<sup>124</sup>

It is clear, then, that editorial and marketing practices were crucial in the diffusion and popularisation of hypertext in the U.S., and it might be suggested that the absence of a comparably dedicated and long-running publishing house in France means that a digital canon, from which recognisable texts representative of the field should emerge, has not really formed. I shall return to this point in my conclusion, having examined the trajectory of digital literatures in France at greater length.

It should also be acknowledged, however, that hypertext was in any case a genre of digital literature historically much more closely associated with practitioners from the US, and animated or generated poetry and texts tended to be more prevalent in the European context. In Philippe Bootz' article 'The Functional Point of View,' Bootz specifically associates the automatic generator movement more with Europe versus the verbose foil of the American hypertext. French and French-language hypertexts do of course exist, though these lag a couple of years behind their American counterparts, and include notable works by François Coulon, Gregory Chatonsky, Lucie de Boutiny and Anne-Sophie Brandenbourger.<sup>125</sup>

Furthermore, the nature of the French texts and the procedural aesthetic these adopt in varying ways makes it much more difficult to group these under a common genre or aesthetic. The separation between, say, the exhibition spaces that displayed works by the likes of Tibor Papp and the later online platforms through which digital works were delivered to audiences and the editorial and publishing spheres in France may well be taken as symptomatic of the French publishing world's somewhat inflexible reception of 'digital born' works, consequently suggesting that the spaces now occupied by digital texts were necessarily created as a consequence of the failure of literary institutions to create or accept dedicated 'literary' frameworks which aimed to support electronic literature and to link it to the print culture, and accounts perhaps for the greater rift between digital texts and literary print culture in France.

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<sup>124</sup>Shelley Jackson, *Patchwork Girl* (2016) <<http://www.eastgate.com/catalog/PatchworkGirl.html>> [accessed 6 March 2018].

<sup>125</sup>Bouchardon, *Digital Literature in France*.

Of course this is a generalisation, and French hypertexts such as Lucie de Boutiny's 'non-roman' and Anne-Cécile Brandenbourger's work 'Apparitions inquiétantes' represent important examples of hypertexts from the French-speaking world.

Comparing the French case to the situation in the U.S., for example, where e-literatures tend to represent forms adjacent to, but not particularly distant from, print literature, this could appear quite plausible. Arguably, though, this detachment from publishing companies and from the print culture, rather than engendering a malnourishment of the French tradition, has conversely allowed French digital texts greater freedom to engage with self-reflexive formal scepticism, whereas many American texts may be seen as streamlined as a result of greater concern for user-friendliness and smooth accessibility.<sup>126</sup>

It may simply have been the case, however, that from the outset and the early years of development of the texts, traditional publishing was not adequately equipped to support and accommodate the parameters of French digital texts, as these were being steadily conceptualised and tentatively created, in the same way as the web or an exhibition space might be.

Based on the notes and presentations of the early Oulipo, I argue that from these very initial elaborations of French digital works onwards, aesthetics were created that anticipatorily rejected the kinds of restrictions that might otherwise be imposed by the literary sphere, rather than in response to digital texts' rejection thereby. This interpretation is supported by the fact that other plastic and sound art forms were never far from these works' conception, as I have demonstrated in my discussion in the previous chapter of François le Lionnais' ideas regarding sculptural and holographic possibilities for the presentation of literature, and the early Oulipo's interest in artists such as Abraham Moles and Ianis Xénakis.

I shall continue to explore this idea – that of a particularly French form of digital 'literature' as a particular kind of digital textuality developed at a remove, on the one hand, from the traditional literary arts, while, on the other, being very much nourished by other art forms such as music and the plastic arts. Throughout the chapters that follow, looking particularly at the juxtaposition of poetic and digital and interactive literary works with documentaries and art installations that has become increasingly frequent over the past few years in France, a tendency in exhibition that

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<sup>126</sup>Borsuk and Bouse's augmented-reality text *Between Page and Screen* may be considered an example of a computer-enhanced text formulated with concern for the reader's empowerment and ease of reading. Bouse explained in an interview following the publication of the work that he 'wanted the casual user to pick up the book, hold it to the camera, and immediately understand how it worked.' D. Shook, *Books 2.0*.

has resulted in challenges to and erosion of the boundaries between literal and visual art, as well as allowing for the dimensionality of text to be explored in complex ways.

To be sure, then, French digital texts have found themselves situated closer to various other artistic traditions than to the literary tradition, practically from the very beginning of explorations with these forms, and this is a proximity that may still be observed today, with many artists in the French context, such as Sophie Calle and Annie Abrahams, working on artistic projects in more conventional media as well as web-based texts of a more literary nature.

That is not to say, however, that current examples do not exist of writers who straddle the boundary between traditional and electronic literatures: Tim Catinat is one such example of a French writer who works both in print literature and in electronic forms, as well as producing graphic works and etchings.<sup>127</sup>

### **Digital texts in the contemporary publishing landscape**

Searches for current examples of French or Francophone publishing houses producing electronic works deliver quite sparse results, and it has become increasingly common over the past ten years or so for the creators of digital texts to publish their work directly, on their own websites, rather than passing through an editor or distributor. One relatively recent example, however, of a publisher dedicated to electronic texts is Editions 00h00.com, a ‘maison d’édition entièrement en ligne,’ which has existed since at least 2000 and has published, among other texts, the hypertext version of *Apparitions Inquiétantes* by Anne-Cécile Brandenbourger, under the title ‘La malédiction du parasol’.<sup>128</sup>

Aside from this rare example of a print accompaniment to an online hypertext, the current 2016 catalogue of 00h00.com consists of e-books created based on corresponding print works, mainly publications for e-readers of writers popularised by the ‘Rentrée Littéraire,’ such as Boualem Sansal and Laurent Binet, as well as Emmanuelle Loyer’s book, ‘Claude Lévi-Strauss.’<sup>129</sup> The coexistence of remediated works and works that are simply created for different reading formats, as seen in the earlier example of Éditions Ilias, thus continues to be a necessary combination for

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<sup>127</sup>Tim Catinat, *Lab* (2018) <<http://catinat.net/?lang=en>> [accessed 6 March 2018].

<sup>128</sup>Bouchardon, *Digital Literature in France*.

The book version was subsequently published by Massot and featured a 3D cover. Anne-Cécile Brandenbourger, *La Malédiction du Parasol* (Paris: Florent Massot, 2000).

<sup>129</sup>00h00, *Les Livres à Lire* (2006) <<http://www.00h00.com/>> [accessed 6 March 2018].

electronic publishers, with the number of ‘digital born’ works created that lend themselves to diffusion for electronic devices insufficient for the specialisation of a publishing house in emerging works and writers to be sustainable.<sup>130</sup>

Another recently active publication company called Kaona published François Coulon’s CD-ROM *Pause* in 2002 as part of a collection entitled ‘Interactive Fictions.’<sup>131</sup> The works published in the collection are mainly hypertext works with important graphic dimensions. Kaona has been publishing works on CD ROM since 1994, when it also published Coulon’s *20% d’amour en plus*.<sup>132</sup>

To turn to a more recent electronic publication, Mathias Malzieu’s work, *L’Homme Volcan* (2013), is an animated text published jointly by Flammarion and Actialuna as ‘leur premier livre application sous forme de fiction adulte’ in partnership with the Centre National du Livre - the work is specifically created to be read on tablets, and it incorporates features that are specific to tactile devices.<sup>133</sup> The work is exceptional, however, in its presence as a digital born work in Flammarion’s catalogue: it does not belong to a range or collection of e-literatures, but the description of the work is followed by a note that ‘Flammarion mène par ailleurs un travail de numérisation et de mise à disposition de son catalogue, disponible notamment sur l’iBookstore.’<sup>134</sup>

The tone of this specification thus suggests that the digital endeavours of the publishing house remain squarely concentrated on the diffusion and digitisation of works ‘born’ in print, and the appearance of ‘L’Homme Volcan’ should not be taken as a harbinger of similar works being released in association with Flammarion the near future. In conclusion, then, examples of contemporary publishing houses, major or minor, supporting emergent digital texts and authors of such works are few and far between, and usually the kinds of ‘electronic’ works currently being distributed by

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<sup>130</sup>Jean Pierre Arbon’s article enters into greater detail on the specificities of 00h00.com, as well as outlining its editorial policy. Jean Pierre Arbon, *Une Maison d’édition en ligne* (2002) <<http://www.braillet.net/org/colloques/00h00.htm>> [accessed 6 March 2018].

<sup>131</sup>Bouchardon, 2012.

<sup>132</sup>Jean Clément, *Écritures hypermédialiques: Remarques sur deux CD-ROMs d’auteurs* (2000) <<http://hypermedia.univ-paris8.fr/jean/articles/ehm.pdf>> [accessed 6 March 2018].  
François Coulon, *Pause* (2002)

<[http://www.agencetopo.qc.ca/vitrine\\_blog/cd\\_pause/cd\\_pause\\_en.html](http://www.agencetopo.qc.ca/vitrine_blog/cd_pause/cd_pause_en.html)> [accessed 29 May 2018].

<sup>133</sup>Mathias Malzieu, *L’Homme Volcan* (2013) <<http://www.mathias-malzieu.fr/lhomme-volcan/>> [accessed 6 March 2018].

<sup>134</sup>Loc. cit.



publishing houses are versions of pre-existing print texts adapted for reading on devices such as e-readers and tablets.

Works that are specifically conceived for computer- or device-based reading, and define themselves in part through the challenge to the enclosure of the text within the device have yet to emerge from such contexts. The play on the physical limits of such reading experiences has therefore been little explored. These kinds of works tend to be encountered rather in the context of exhibitions and as installation pieces, rather than being distributed by specific editors. I shall refer to various examples of these former kinds of works in the coming sections.

### **DOC(K)S and Akenaton**

As I suggested earlier, the French tradition of digital texts tends less to produce works that may be grouped by genre or approach, as is roughly the case, for instance, with U.S. hypertext literatures, but is rather more frequently characterised by groups and collectives of artists whose aim is not so much to work exclusively on producing innovative literary forms as to incorporate textual dimensions into what is usually a complex, procedural aesthetic, usually drawing on visual and sculptural art forms, as well as sound and other elements.

Text in these works therefore typically represents a component of the conceptual articulation of the work itself and its positioning of the viewer/reader, rather than operating as part of the elaboration of a more remote, contained narrative. An example of one such collective is the Akenaton group, founded by the poet Philippe Castellin and the plastic artist Jean Torregrosa in 1984 in Corsica. Akenaton is a self-declared ‘intermedia’ group whose practices aim to blur the boundaries between different artistic practices.

Among the works created by the group, there are many that take the form of installations and performances, as well as several works that refer critically to visual poetry and its various currents. In 1987, Akenaton proposed the term ‘install’action’ to describe a particular kind of dynamic performance poetry and the constitution of ‘espaces de langage.’

Akenaton took over the *DOC(K)S* review around 1991: the review had previously existed since 1976, when it was founded by the poet Julien Blaine.<sup>135</sup> The third and fourth series of the review were therefore created under the direction of Castellin and Torregrosa. The third series (1990-2007) of thematic issues is marked by its connections to digital themes. The fourth series, which began in 2006-07, is similar in this regard, but has also seen the return of Blaine to the editorial committee. The review encourages its contributing poets to combine the features of print texts with those of electronic devices, and it is the poets themselves who carry out the programming and video direction integral to the completion of their works.

While involvement with *DOC(K)S* has therefore been one of the main branches of the Akenaton group's activity, the group has not limited itself to the two-dimensional constraints of publishable work, and has equally undertaken many projects that engage with larger spatial dimensions, such as site-specific works at the Musée de Cannes.<sup>136</sup>

Akenaton has also published artists' books and produced DVDs and CD-ROMs on which the group's works and performances have been recorded.<sup>137</sup> The group therefore represents a kind of convergence and mutual benefit between two broad tendencies for presentation of digital projects, strategically making use of aspects of both the experimental and electronic publishing channels as well as from the larger, more physically elaborate spaces of installations and exhibition-orientated work.

Furthermore, Akenaton has made use of recorded forms as a way of documenting and re-presenting performance or site-specific works, as was the case, for example, with the group's *Mal\_de\_Terre* project. The project took place in 2001, with the making of a film from a boat that travelled around Corsica. Using the footage, five years later 74 interactive DVDs of 1 hour and 10 minutes' duration in

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<sup>135</sup>Wikipedia, *Doc(k)s* (date unavailable) <[https://fr.wikipedia.org/wiki/Doc\(k\)s](https://fr.wikipedia.org/wiki/Doc(k)s)> [accessed 6 March 2018].

<sup>136</sup>Some projects are referred to at Wikipedia, *Akenaton* (date unavailable) <<https://fr.wikipedia.org/wiki/Akenaton>> [accessed 29 May 2018].

'*Pastorale* au Château Musée de Cannes...une imprimerie désaffectée pour *Semina Rerum*...le ciel en sa totalité pour *RitULM* (*les Arts au Soleil*, 1991),' but online searches for images or articles on these projects do not deliver any results.

<sup>137</sup>Loc. cit.

each case were presented as part of a huge, circular installation consisting of monitors and DVD players.<sup>138</sup>

In this project, then, the various modes of presentation and engagement with the project are employed as a kind of chain of events, in which each stage may be taken as a valid part of the work in question. In the next section I shall discuss the origins and development of this notion of digital text as a literature lending itself to exhibition.

The kinds of exhibition in which electronic works found themselves over the past decades is telling of the stages of development of the field: while the earliest presentations by the Oulipo were orientated towards the discovery of the idea of ‘machine’ authors and assisted reading, the 1980s saw the evolution of this theory into one that assumed a much closer acquaintance with computing technologies on the reader’s side.

Finally, the kinds of exhibitions that took place in the late 1990s and early 2000’s could assume and build on ideas such as that of dispersed subjectivity, ephemeral works, shifting signification and procedural aesthetics, which had been explored in the preceding years.

### **Exhibitions as platforms for electronic texts**

The incorporation of electronic texts at artistic events and exhibitions in France may be traced back to the Oulipo’s very first public appearances, and the presentations made by the group regarding the potential applications of machine assistance for literary projects: that is to say that electronic textuality has lent itself to the context of the interdisciplinary exhibition for as long as it has existed: or this may be said of the French context, at least.

The idea of incorporating computer-assisted, textual works in contexts traditionally reserved for visual art forms has thus characterised the field of French digital literature from the very first stage of its development. Indeed, Queneau’s sonnets and the *Conte à votre façon*, works to which I have already referred in the first chapter, provided tangible and demonstrable examples of the kinds of works that were to follow, as well as proving the conductivity of these works, with their own particular *modes d’emploi*, to the exhibition setting, such that they could be explored

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<sup>138</sup>Loc. cit.

and explained as necessary. The public's discovery of these works could therefore be encouraged in the context of the public exhibition without sacrificing the challenging aesthetic and functional dimensions of the works themselves in favour of the kind of user-friendly qualities that would be more desirable for a take-home reading.

Many, though not all, of the exhibitions that brought early examples of electronic literature to the attention of a non-specialist audience took place at the Centre Pompidou. The first linking of digital texts with the Centre Pompidou took place through contributions from the Oulipo group. The Journée 'Écrivain, Ordinateur, Algorithme,' held on 15 June 1977 and organised by the Atelier des Recherches Avancées, represented the first of a number of events that sought to make electronic composition and readership a collective and collaborative endeavour, to which attitudes and approaches would be publicly discussed and developed.<sup>139</sup>

The role of artists and writers in these kinds of environments was not limited to the passive supply and exhibition of artworks and texts, however, and in addition to invitations to present projects underway within the group, during these earlier years members of the Oulipo were also frequently consulted on subjects relating to computing technology's implications for culture and society.

The group, for example, partook in a conference on the subject of 'Informatique et société' at the Palais du Congrès on 28 September 1979, which was particularly concerned with the impact of technological advances on employment, and discussing whether these advances might represent potential threats, not only to culture and the humanistic notion of creativity, but also to society more broadly.<sup>140</sup>

Furthermore, the Oulipo's relationship to the Centre Pompidou in fact carried on beyond the group's own interests in computer-assisted creation, which had been taken over by the Alamo group in 1981, and several oulipians were among those consulted prior to the creation of *Ex Machina*, a journal formed at the Pompidou in

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<sup>139</sup>It was through Blaise Gautier, who probably was aware of the Oulipo on account of his work with the oulipian Jean Lescure and the Groupe d'Études Critiques in the 1960s, that the Oulipo were invited to present their activities at the Europalia festival in Brussels in 1975. By May 1975, when the Oulipo received this invitation, Gautier was head director of the Centre national d'art contemporaine (or CNAC), whereby he was also in charge of the coordination of events at the newly founded Centre Georges Pompidou from 1975 to 1977.

See Oulipo, *Atlas*, for details of the participants in the journée and their respective presentations.

<sup>140</sup>Fonds Oulipo.

the 1980s with the aim of encouraging discussion of mechanical and cybernetic themes and the implications and applications of these for various artistic fields.<sup>141</sup>

Jacques Roubaud, Marcel Bénabou and Paul Braffort were particularly involved, and the Alamo was among the several partner organisations of the journal. Members of the Oulipo and Alamo also contributed to some of the textuality-based installations at the immense exhibition *Les Immatériaux*, held at the Centre Pompidou in 1985 under the direction of Jean-François Lyotard and Thierry Chaput. Several oulipians also took part in the *Épreuves d'écriture* writing project, which formed part of the exhibition and to which I shall return in greater detail in the next chapter.

It was around the time of *Les Immatériaux* that actors in the field of electronic text and assisted creation from outside the Oulipo and Alamo groups came to the fore. Moreover, while the emergence of new practitioners indicated the growth and diversification of the field of electronic literature, the decline of the avant-garde group model and of the synonymy of a select few writers with these methodologies may also be read as part of the more fundamental shift away from unified or exclusive authorship and towards the kinds of collective, collaborative writing projects that undermine the identity of the author in favour of the dynamic and evolving qualities of the work itself. I shall dedicate the next chapter to the exploration of this idea. As has become clear in this section, the evolution of digital literature in France was marked from the beginning by an importance of the discourse surrounding the works, and so to a greater extent than in the case of print literatures, public discussion and exhibition was required so that the works could better be understood and received in terms of the context of their creation and emergence. Perhaps it is for this reason that exhibition spaces, installations and performance works proved more compelling environments for the production of digital textualities for later French writers and artists than more traditional, publishable forms, whose physical limitations were nonetheless explored and challenged by practitioners of digital art and writing during these years.

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<sup>141</sup>Fonds Oulipo. Document: Centre Georges Pompidou, 1994, 'Ex machina: Etude pour une nouvelle publication au Centre Pompidou réalisée par Norbert Hillaire avec le concours de Françoise Bertaux, Nadine Doreau, Katherine Tanneau pour le compte du Département du développement culturel.'

### **‘Espaces Interactifs Europe,’ 1996**

An important event at which digital texts were among the items exhibited to the public, taking place later than the exhibitions and *Journée* discussed in the previous section, as well as being external to the Centre Pompidou, was the ‘Espaces Interactifs Europe’ exhibition. Held at the Pavillon de Bercy in May and June of 1996, the exhibition provides a noteworthy instance of public exposure to digital literature in the context of an interdisciplinary exhibition including two more literary kinds of installations along with other interactive works of a more artistic or documentary nature.

The work of nine European artists or groups of artists, created on CD-ROM, the Internet or floppy disk, were presented at the exhibition, which was the first in France to show artistic creations on CD-ROM. Two of the French works included in the exhibition demonstrate significant textual components, and were both presented as digital poetry: the first was Philippe Bootz’ *Passage (Poème à lecture unique)* and the second was Jean Dutey’s *Les mots et les images*.<sup>142</sup> The third French work, created by Nil Yalter, David Apikian and Nicole Croiset, *Pixelismus*, though it is not exhibited as a poetic or textual work, engages with the nuances of textuality and symbolism.

It is evident, first of all, that the public encountering the work of Bootz and Dutey in the context of this exhibition, were confronted with poetic works not solely destined for private reading, but whose visual and kinetic properties also rendered these fluid and fitting inclusions in an exhibition of artistic installations. It may also be observed that the spirit of the exhibition’s curation had less to do with the artistic disciplines of the works and instead sought to reunite these within a common thread of interactivity. It is this interactive dimension that characterises the visitors’ modes of consultation, then, rather than familiarity with the traditional viewing or reading practices associated with each individual art form. The organisers of this exhibition were quite aware of the breakdown of distinctions between art forms that this juxtaposition of works implied. In Jean Tibéri’s foreword to the exhibition catalogue, Tibéri writes:

Si j’ai souhaité créer un horizon plus inhabituel dans nos programmations d’art contemporain, et choisir que l’art électronique soit présent, notamment

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<sup>142</sup>Annick Bureau, *Espaces Interactives – Europe* (1996) <<http://www.annickbureau.net/?p=88>> [accessed 29 May 2018].

au Pavillon de Bercy, c'est que le jardin, en général, est un lieu paradoxal. Il crée des promiscuités qui ne sont pas celles de la nature: s'y côtoient, au nom de l'art des jardins, des plantes qui habituellement vivent très loin les unes des autres.<sup>143</sup>

If the exhibition aimed to erode traditional delineations between artistic disciplines in the interests of exploring a technological theme and influence common to each of the works chosen, it also aimed more practically to make CD-ROM and internet-based works accessible to a wide public:

Permettre aux visiteurs qui ne possèdent pas d'ordinateur ou qui n'ont pas encore un lecteur de CD-ROM, de voyager sans quitter leur fauteuil, permettre à celui qui manipule déjà ces nouveaux instruments, mais qui n'est pas encore abonné à un accès à Internet, de découvrir le réseau, voilà une proposition qui me réjouit, parce qu'elle est, grâce à cette manifestation, ouverte à tous.<sup>144</sup>

Philippe Bootz describes a unique-reading poem as a poem whose 'final state is only reached once for a given reader and this final result is replicated indefinitely in the next readings.'<sup>145</sup> The reader cannot reset or reverse any of her actions, but rather the poem is a result of their cumulative incorporation to the work.

Bootz's *Passage (Poème à lecture unique)*, one of the works exhibited at Espaces Interactifs Europe, consists of three phases, the first a multimedia phase, followed by an interactive phase and lastly an animated, non-interactive phase. The first phase offers one option among several others, that of 'rereading,' which takes the reader to the results of their previous reading of the work, taking this as a point of departure. Bootz explains the dependency of the interactive work on the reader as follows:

The unique-reading poem can be compared to a living organism which grows according to the reader's actions. But unlike a living structure, it becomes static when all conditions are fulfilled, its state similar to that of any printed text. Behind this characteristic emerges the confrontation between a vision of literary work as a defined object or sign (particularly vivid in literature) and a

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<sup>143</sup>Roger Malina, ed. *Espaces interactifs Europe* (Paris: Ville de Paris: Pavillon de Bercy, 1996).

<sup>144</sup>Ibid.

<sup>145</sup>Philippe Bootz, 'Unique-Reading Poems: A Multimedia Generator,' in *New Media Poetry: An International Anthology*, pp.67-75.

conception of literature as a continuous generation process: permanent in its functioning but only readable through its relative and transitory states. I call this kind of work “procedural work.”<sup>146</sup>

*Passage* is ultimately a work that is read twice, the first reading is a participatory mode of readership whereby the reader’s choices shape the work. The subsequent re-reading consists of observing these imprints of the reader on what Bootz calls the ‘text-to-be-seen’: the text that emerges from the generation process with the visible results of its making on display.<sup>147</sup> It is only then from the position of the reader who has participated in the constitution of the work that the semantic history of its content may be fully appreciated.

### **Conclusion: New physicality for text and a ‘literature’ outside of the book**

As I have argued in this chapter, the versatile settings of galleries and exhibition spaces have contributed greatly to the elaboration of diverse forms of digital literature, as well as to the nurturing of the corresponding discourses and the theoretical contexts from which these works are born. Publishing bodies and the production of electronic works on CD-ROMs and floppy disks also contributed to the evolution of digital literatures, and the interaction between the texts and these channels of distribution and diffusion also informed how the works are situated and diffused today.

The Internet has now well and truly replaced these electronic forms of storage, lending both new freedoms and new challenges to the definition and constitution of the field. One principal development that may be observed since the 1980s, both in terms of exhibition and anthology formation, is the shift in focus from a national frame to more mobile forms of comparison and interaction. This may be observed, for instance, in the inclusion of the French writer Serge Bouchardon’s 2013 text *Séparation* at a recent exhibition of digital literatures at the Paul Watkins Gallery of Winona State University in September-October 2016.<sup>148</sup>

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<sup>146</sup>Ibid., p.68.

<sup>147</sup>Ibid., p.69.

<sup>148</sup>Dene Grigar, *You/I: Interfaces and Reader Experience* (2016)  
<<http://dtc-wsuv.org/elit/you-i/index.html>> [accessed 6 March 2018].



While, then, the internet has vastly simplified the questions relating to accessing digital works, it has also meant that the field has taken on an international quality, whereby works from various currents and countries may be easily consulted, read and analysed regardless of linguistic or geographical distance. It follows, then, that Bouchardon's work is exhibited along with nine other works of digital literature created by artists and writers from various countries and influenced by different traditions.

The formation of anthologies of digital literatures has been similarly internationalised since the Internet has become such an accessible and convenient vehicle for makers of digital literature to publish their works. The collections compiled by the Electronic Literature Organisation, which produces anthologies of selected digital texts, thus takes the form of a homepage that consists of a kind of mosaic of thumbnail links, each of which lead to individual works from a range of international digital literature projects and texts.

This menu, with its semblance of symmetry and order, in fact encompasses a range of texts that vary greatly in tone, content, aesthetics, scale, structure and reading mode required. Through the series of exhibitions in which digital works were included over the years, some of which I have described here, the progression may be seen from the interest in immateriality in the 1980s, which gave way to contemplation of interactivity in the 1990's, bringing us to the current, dominant theme of the interface, which continues to interest both makers and readers of digital works.

It might be argued that publishing works in 'final' versions runs against the grain of the intentions of many digital creators producing such works today: indeed, variation and instability are crucial characteristics of these texts, and elements that preparation of a publishable form threatens to fix in a counterproductive manner. More recent online texts, such as those I will discuss in the second part of this thesis, have come to question this metaphorical autonomy of the reader/writer, and such texts frequently employ and elicit the frustration of the reader as an aesthetic facet of the work in itself, engendered for instance through the rapid and fleeting display of content, through evasive and ephemeral textual components, integrated bugs and viruses, the implication of particular features that are hidden in the work, and so on.<sup>149</sup>

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<sup>149</sup>Serge Bouchardon's text, *Toucher*, for instance, incorporates a sixth, concealed animated sequence. The menu of the text takes the form of the outline a hand, each of whose fingers offers a different

All of these features contribute to reminding the reader that the kind of polyvalent mastery initially celebrated by manageable, or simultaneously readable and writable texts, is ultimately illusionary, or at least deceptive in its methodological selectivity, masquerading as an all-encompassing operation, whilst the wider components of the computer's activities and tasks typically remain outside the scope of the multitasking reader's control. The Internet, and its emergent and evasive qualities, thus prevails as both a vehicle of and an integral part of the digital works, as I shall discuss in the coming chapters.

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chapter or sequence. There is, however, a sixth part to be located on this home screen without any visual clues offered as to its whereabouts. This teasing implication of a further dimension beyond the physically locatable is both ludic and significant in terms of the scope that it suggests for a neomaterial beyond. I shall return to this text in the fifth chapter. Serge Bouchardon, *Toucher* (2009) <[http://collection.eliterature.org/2/works/bouchardon\\_toucher.html](http://collection.eliterature.org/2/works/bouchardon_toucher.html)> [accessed 6 March 2018].

## Chapter Three

### *Les Immatériaux* (1985):

#### Interactive Writing, *Épreuves d'écriture*, and Literature as Soundtrack

##### *Introduction*

The exhibition *Les Immatériaux*, curated by Jean-François Lyotard and Thierry Chaput, and held at the Centre Pompidou in Paris between March and July of 1985, explored the increasingly pervasive influence of new technologies on cultural production and diffusion, combining intersecting artistic disciplines in a rich and broad-ranging exploration whose programme included a Stockhausen premier and a series of film screenings, in addition to the 26 ordered zones of the main exhibition, which occupied the full fifth floor of the Centre Pompidou.<sup>150</sup>

The limits of individual and contained, rather than dispersed, subjectivity were challenged by an explicit presentation of new machines as extensions ‘de nos capacités de sentir et d’agir,’ a potential enhancement whose benefits would nonetheless require inquisitive and participatory engagement in order to be understood and managed.<sup>151</sup>

Indeed, the exhibition was highly concerned with exploring and rendering the breadth of phenomenological experience as this was nuanced and inflected by technological and material factors. The *Petit Journal* that served as a print accompaniment to the exhibition stressed the importance of engagement with the exhibition content in terms of these physical and sensory considerations:

L’insécurité, la perte d’identité, la crise ne s’expriment pas seulement dans l’économique et le social mais aussi dans les domaines de la sensibilité, de la connaissance, et des pouvoirs de l’homme (fécondation, vie, mort), des modes de vie (rapport au travail, à l’habitat, à l’alimentation, etc.)<sup>152</sup>

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<sup>150</sup>Bruce Altschuler, ed. *Biennials and Beyond: Exhibitions that made art history: 1962-2002* (Phaidon, 2013), p.215.

<sup>151</sup>‘Octave au pays des Immatériaux,’ (film), Bibliothèque Kandinsky, Centre Pompidou. [01:20].

<sup>152</sup>Archives du Centre Pompidou, ‘Le Petit Journal,’ 28 mars - 15 juil 1985.

In *Biennials and Beyond – Exhibitions that Made Art History*, *Les Immatériaux* is portrayed as an exhibition whose ‘subject was the way in which new materials and technologies have altered our notions of objecthood and the self.’<sup>153</sup> Details of the exhibition’s makeup, due to its sprawling, labyrinthine nature and subdivision into 61 ‘sites,’ are now relatively difficult to trace, and information about the exhibition may mostly be found in articles that take selected aspects thereof, their authors dedicating their attention to particular projects or sites within the wider exhibition.

This is with the noteworthy exception of Antonia Wunderlich’s lengthy work, *Der Philosoph im Museum*, published in 2008.<sup>154</sup> Wunderlich’s book is the most exhaustive work to have been published on the exhibition; it has yet to be translated from the original German but provides much valuable information on the exhibition and its context.

Wunderlich first undertakes an extensive exploration of the cultural and thematic aspects of the exhibition and its context in her earlier chapters, after which there is a detailed exploration of each site in the chapter entitled ‘Phénoménologie de la Visite.’ The latter provides as reliable as possible a recreation of the exhibition experience for those who were not able to experience it directly. Something of the overall effect of the exhibition in its full range of sites and events might otherwise be achieved by mining the Archives du Centre Pompidou, which contain thousands of boxes of documents detailing the exhibition setup and design, as well as documents produced at the various sites of the exhibition during the period for which it was open to the public.<sup>155</sup>

Wunderlich’s descriptions, however, succeed in conveying to a greater degree the elements that made themselves apparent to the average visitor, rather than entailing the kind of cartographical approach or spirit of reconstruction that an archival revisitation of *Les Immatériaux* would require. Furthermore, these archival documents at the Centre Pompidou are not ordered by any inventory, but rather cover

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<sup>153</sup> *Biennials and Beyond*, p.215.

<sup>154</sup> Antonia Wunderlich, *Der Philosoph im Museum: die Ausstellung ‘Les Immatériaux’ von Jean François Lyotard* (Bielefeld: Transcript, 2008). Wunderlich’s book represents the most rigorous published exploration of the exhibition as a whole, including an introductory discussion of the exhibition in the context of the 1980s museum ‘boom’ in France.

<sup>155</sup> Source: Visit to the Archives du Centre Pompidou in December 2016.

*Les Immatériaux* through an endless sprawl of detail committed to paper that reflects the expansive and interconnected nature of the exhibition itself.

It is important to note that the exhibition was accompanied by a carefully composed *bande sonore* in which visitors were immersed as they navigated through the sites wearing their individual, compulsory headphones. This soundtrack included readings of excerpts of texts written by various authors, including sections of literary works by Marcel Proust and Samuel Beckett, among many others.<sup>156</sup>

The soundtrack to *Les Immatériaux* tended to create a thematic, but not necessarily didactic, resonance with the works being viewed and experienced: the exhibition visitor was thus in this way endowed with a further layer of work to be deciphered. I shall discuss in more detail in a later section how this layering was achieved, and how the pairings of texts and visual sites were established and tracked.

In this chapter, I shall focus particularly on the sites and works of the exhibition that incorporated investigations of textuality, of the act of writing and of literary components and on how these zones and their associated considerations lend themselves to subdivision and recombination. In addition to the authors whose works were incorporated in its *bande sonore*, the exhibition was replete with contributions from prominent French writers and thinkers of the time such as Jacques Derrida, Michel Butor, Bruno Latour, Philippe Lacoue-Labarthe and the Alamo group, among many others.<sup>157</sup>

Installations reflecting on the purpose and nature of literature and textuality formed important parts of the exhibition, which in turn adopted these in relation to its own themes so as to represent questions related to the ‘immaterialisation’ of literature and writing, such as the release of narrative modes of writing from the solid, closed form of the printed book.

The problematisation of concepts such as those of production and sources, particularly in relation to writing, was also central to the exhibition’s investigation of textuality, and accordingly most of the literary works displayed at *Les Immatériaux* were aligned with the ‘Maternité’ strand of the exhibition’s theme, including sites displaying authorless texts (‘Tous les auteurs’) and rewritable (‘Séquences à

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<sup>156</sup>Hui and Broeckmann, eds, pp.75-77.

<sup>157</sup>The Alamo was founded in 1981 by the Oulipo members Paul Braffort, Jacques Roubaud, Paul Fournel and others. The Alamo’s activities are discussed in chapter 2.

moduler') literary works.<sup>158</sup> Indeed, most of the sites I shall discuss in this chapter, those involving writing manoeuvres and literary segments, fell under this section dedicated to the exhibition's thematic current of 'Maternité.'

*Les Immatériaux*, then, rather than exhibiting still, finished textual works, offered visitors multiple opportunities to consider composition and inscription as collective, fluctuating and participatory endeavours, in which they were called to intervene in various ways that reworked and steered the formation of the texts on display, rather than viewing texts as the results of a complete process to be received and considered from a passive distance.

Considerations of the processes and methodologies of composition were thus privileged over the works to which these gave rise, almost as insignificant as by-products, in favour of mobilising text and undermining the stubbornly immobile aspect of complete textual works. In this regard, the methodology and manipulations that might be performed on pre-supplied texts are assigned importance across the writing sites of *Les Immatériaux*, considerably more so than the hermeneutic interrogation of any inherent quality of the textual and scriptural forms themselves.<sup>159</sup>

The kind of hermeneutic approach through which literary texts would usually be accessed and received is thus displaced, with meaning and importance instead ascribed to the task of observing the responsive behaviours of literal and written forms as these are subjected to various calculated procedures at each site. In a later section I will discuss and compare the kinds of operations performed on pre-prepared text excerpts at the various sites of composition and interactive writing at *Les Immatériaux*.

I shall argue, as this chapter continues, that text is often mobilised in *Les Immatériaux* as a kind of uniform substance that is drawn upon by the exhibition's sites, and which is cut like cloth in accordance with the operations to be performed on it. This mobilisation of textual stocks in such a way that treats the literary work specifically - and to a greater extent than other forms of text - as a kind of prior

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<sup>158</sup>The topic of 'Maternité' is introduced in the exhibition *Album* as 'la source du message, ce qui lui donne l'existence et l'autorité, son auteur.' Archives du Centre Pompidou.

<sup>159</sup>This with the exception of 'Five Words,' a work displayed at the 'Mots en scène' site, which I shall discuss in a later section.

resource is very typical of the generative approach to computer-assisted literary creation.<sup>160</sup>

In this respect, then, the fact that this somewhat subordinated utilisation of literary texts should also prevail in *Les Immatériaux* is unsurprising: the way in which existing literary texts were taken and reordered was very much in the spirit of contemporary assisted composition, as this was practiced by the Alamo in particular.

Moreover, this was not just the case for the text segments exhibited visually, but also applies to the way in which readings of literary texts were also made use of in the exhibition soundtrack. The readings from literary works in the latter case also bears this sort of anterior quality, whereby the texts are incorporated as pre-existing ‘material,’ sliced as required from the source work, by virtue of thematic or syntactic content that complements a particular endeavour or question from which it remains largely removed – or to which it simply does not originally refer - on the level of the artwork in itself.

It is not the case, on the other hand, that the soundtrack texts are chosen so as to create a kind of thematic or conceptual friction with the works being viewed, but rather they typically supplement the work on show in a way that thematically mirrors or bolsters it. I shall return to this point in a later section.

The exhibition’s promotion of alternative conceptions of textuality and composition thus represented an important step in the development and promotion of alternative experiences of literature, particularly insofar as spatial considerations were identified as facets of textuality calling to be addressed and reworked. I will argue in this chapter, however, that this spatial dimension that was to be incorporated into later digital texts was introduced adjacently, rather than frontally, by *Les Immatériaux*.

By this, I mean to suggest that the limitations of densely permuted textualities were exposed by showing these alongside and compared with the more futuristic textures of the audiovisual and plastic works with which these were exhibited. In this regard, then, I argue that *Les Immatériaux* contributed to the evolution of digital literature in France more insofar it brought to light the limitations of such text-heavy forms as those displayed at the generative writing sites of the

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<sup>160</sup>Indeed, this privileging of methodology and modes of permutation essentially had to be achieved through the use of exemplary and familiar semantic fragments whose banality somehow operated as a foil to the innovation performed in the former, making the operations in question more visible and tilting the subject and focus of the work from content to form.

exhibition (of which I shall identify specific examples in a later section of this chapter) by contrast to the more dynamic, intermedia works surrounding these, which arguably conveyed the kinds of phenomena and themes addressed by the exhibition with greater presence and pertinence.

It is not insignificant that most of the sites of *Les Immatériaux* that incorporated works reflecting on writing and authorship were grouped together, as well as being placed towards the exit of the exhibition. John Rajchman, in his article for *Tate Papers* no.12, 'Les Immatériaux or How to Construct the History of Exhibitions,' includes a photo of the 'tous les auteurs' site at *Les Immatériaux*, the concluding area of the exhibition's labyrinthine routes, which allowed visitors to participate in real time in digital writing experiments.<sup>161</sup>

Taking the implantation of writing within the overall space into account, the questions raised by such sites might be considered as deliberately positioned by the exhibition curators as unresolved, largely unaddressed, and in this respect more complex than many of the suggestions presented by the visual and plastic works that were experienced by visitors in the previous sites.

*Les Immatériaux* did not result in a single catalogue covering the exhibition its entirety, but rather in two major publications, which were produced to document its dimensions in subtly different ways. The first of these publications was a folder of loose papers, with an *Inventaire* describing the sites of which the exhibition was composed, and a bound *Album* consisting of notes and sketches relating to these sites.<sup>162</sup>

The *Petit Journal*, a 16-page review dedicated to the exhibition, is preserved alongside these more durable publications at the Bibliothèque Kandinsky and the Archives of the Centre Pompidou, and represents a kind of ephemeral and more colloquial counterpart to these, though its texts are no less inviting and no less useful to the reader than those of the larger, permanent publications issuing from the exhibition.<sup>163</sup>

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<sup>161</sup>John Rajchman, *Les Immatériaux, or How to Construct the History of Exhibitions* (2009) <<http://www.tate.org.uk/research/publications/tate-papers/12/les-immateriaux-or-how-to-construct-the-history-of-exhibitions>> [accessed 6 March 2018].

<sup>162</sup>Various authors, *Album* and *Inventaire* (1985) <[https://monoskop.org/images/5/52/Les\\_Immatériaux\\_Album\\_et\\_Inventaire\\_catalogue.pdf](https://monoskop.org/images/5/52/Les_Immatériaux_Album_et_Inventaire_catalogue.pdf)> [accessed 6 March 2018].

<sup>163</sup>*Ibid.*



The second significant publication to emerge from *Les Immatériaux* was a softcover, bound edition, the result of an experiment linked to one specific site of the exhibition, entitled *Épreuves d'écriture*. This publication was a print adaptation of 'the records of a computer-mediated discussion among 26 participants,' among them Jacques Roubaud, Michel Butor and Jacques Derrida. This experiment had been set up by Lyotard and Chaput, and the publication that emerged from it was based on the discussion engendered by a set of 50 terms that had been proposed by the two organisers and supplied to participants at the outset of the experiment.

The publication of *Épreuves d'écriture* thus maps out the contributions these terms triggered from the writers involved, which had also been consultable at the exhibition for the time that it was open to the public, in searchable forms that allowed visitors to the site to browse by term or by contributor, for example.<sup>164</sup>

Antony Hudek notes that Lyotard held this second volume in high esteem, speaking of the project's results as follows: 'It is probably a "book" that elicits a kind of beauty, as it were, very different from what I was accustomed to. For me it was a great book.'<sup>165</sup> The fact that Lyotard refers to *Épreuves d'écriture* in terms of the publishable result of the experiment, rather than as the procedural entity the final work documents, as a 'book,' in inverted commas, betrays the lingering hesitation felt towards the possibility of asserting such transitory material as 'literary' – including such hesitation on the part of those who orchestrated the experiments.

The assertion of the literariness of the procedural dimension of such projects, and of transience and ephemeral components as vital characteristics of the works, would come later, with the theories of the Transitoire Observable collective.<sup>166</sup> Jean-Pierre Balpe, who was present in the exhibition and who contributed to the displays and discussions of writing at *Les Immatériaux* as a member of the Alamo group, was to become a key figure in the promotion of these procedural and ephemeral qualities as valid literary modes of creation and reading. Francesca Gallo in fact reads the

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<sup>164</sup> *30 Years*, pp.16-17. The project was displayed in searchable form by author/keyword. *Album*, Archives du Centre Pompidou. Multiple authors, *Épreuves d'écriture* (1985) <[https://monoskop.org/images/f/f9/Les\\_Immatériaux\\_Epreuves\\_d\\_ecriture.pdf](https://monoskop.org/images/f/f9/Les_Immatériaux_Epreuves_d_ecriture.pdf)> [accessed 6 March 2018].

<sup>165</sup> Antony Hudek, 'From Over-to-Sub-Exposure: The Anamnesis of *Les Immatériaux*,' in *30 Years*, pp.76-77.

<sup>166</sup> Bootz, Gherban, Papp, *Transitoire Observable: Texte fondateur* (2003) <[http://transitoireobs.free.fr/to/article.php?id\\_article=1](http://transitoireobs.free.fr/to/article.php?id_article=1)> [accessed 6 March 2018].

publication of *Épreuves d'écriture* on paper and as a bound work as a stifling of the procedural qualities of the experiment *qua* work. In 'Contemporary Art as an *Immatériaux*,' Gallo writes: The book is obviously the wrong format for a work that should have continued to be produced in a digital format like a hypertext (on a hard-drive memory, because the CD-ROM did not yet exist.)<sup>167</sup>

The main exhibition publications, the *Album* and the *Inventaire*, were regarded as contributing to the exhibition's particularity, and these texts - distinct but complementary, supplementary but not exhaustive - contributed to the elaboration of a specific model for *Les Immatériaux* that was to distinguish its orientation and presentation from the familiar signposting of exhibitions as these are traditionally produced:

Le décalage se situe aussi dans les outils de connaissance et d'approfondissement qui accompagnent la manifestation: au traditionnel catalogue, se substituent divers produits témoignant d'une démarche différente (*Inventaire*, identifiant des « sites », *Album*, retraçant l'itinéraire de travail suivi par les concepteurs, *Épreuves d'écriture*, publication des résultats d'une expérience d'écriture collective, interactive et à distance.)<sup>168</sup>

The temptation arises, in Lyotard and Chaput's capacities as the exhibition organisers, to envisage these as to some extent the 'authors' of the sites, the curators of the sites' content in a more granular and detailed sense. Broeckmann and Hui, in their *Introduction*, with reference to Boissier and Broeckmann's interview, confirm that it was not, in fact, the case that Lyotard actively chose many elements of the exhibitions or the arrangement of the zones' content in his capacity as curator.<sup>169</sup> These sites were, rather, conceived and constructed on a more isolated, thematic basis, and work on elements of the exhibition such as the *Album* dated back to well before Lyotard even became involved with the project.<sup>170</sup> This blockage to the tendency of ascribing 'authorship' to the phenomenon of *Les Immatériaux* and the interlinking of the sites is crucial to understanding the spirit of the exhibition and the kinds of challenges it posed to traditional curatorial practices and approaches to reception.

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<sup>167</sup>30 Years, p.135.

<sup>168</sup>*Album*.

<sup>169</sup>*Ibid.*, p.21.

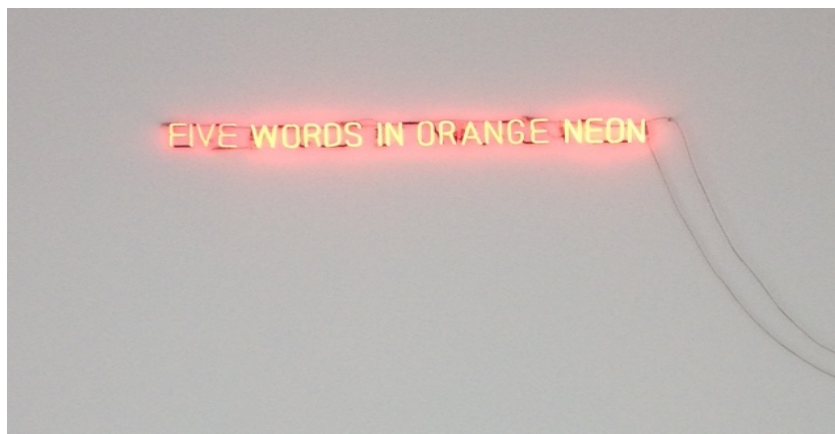
<sup>170</sup>Loc. cit.

### **Sites of writing**

The 61 ‘sites’ of which *Les Immatériaux* was composed took up the whole of the fifth floor of the Centre Pompidou.<sup>171</sup> In this section, I shall focus specifically on those sites that dealt with evident written and literary components, addressing questions of textuality and authorship as these intersected with the spirit and purpose of the exhibition overall.

My discussion of each site shall be based on the files that document these, which are compiled in the exhibition *Album*. Some of these sites, such as the ‘Romans à faire’ site, dealt explicitly and in a rather practical, interactive way with questions of authorship and narrative. Others, such as the ‘Mots en scène’ site, investigated textuality as an entity in and of itself, relating the physical, spatial forms of text to its semantic and narrative operation.

‘Mots en scène’ deals with writing insofar as the latter represents itself, operating as a kind of ubiquitous embellishment on signage and packaging for various kinds of products. It is suggested that in certain cases, such as these, writing operates more potently through its tangible, superficial form than the significance of what this form describes. The site thus invites the exhibition visitor to contemplate writing aside from its descriptive or signifying function, rather as a textured and spatial presence defined more by its surface than its connotation. Joseph Kosuth’s work ‘Five words’ (1965) was one of the works on display in this part of the exhibition.



Joseph Kosuth. *Five words* (1965)

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<sup>171</sup> *Rereading Jean-François Lyotard: Essays on his later works*, ed. by Heidi Bickis and Rob Shields, (Farnham, Surrey: Ashgate, 2013), p.17.

The ‘Séquences à moduler’ site, though created by Michel Bézard, exhibits clear affiliations with the Oulipo and Alamo’s methods of text generation, and though there is no evidence of collaboration with the group members, awareness of their *modus operandi* may be presumed: ‘La machine met à votre disposition des règles de syntaxe, qu’elle conserve, et des éléments combinables que vous appelez. Vous composez avec elle votre récit...’.<sup>172</sup> While the invitation to the visitor to engage with the site interactively resonates with contemporary tendencies in participatory art and composition, the presentation of the site also evokes the long tradition of combinatoric literature, and its mining of permutations as the expression of a quest for meaning.

Two types of combinatoric experience are offered to visitors to the ‘Séquences à moduler’ site: the first, ‘Contes d’électron,’ is compared to the tarot, insofar as its schema is also one of relative and evolving meaning.<sup>173</sup> The syntax on which the programme is based is that of the traditional ‘récit.’<sup>174</sup> The other option offered to readers at this site, ‘Chansons modulaires,’ entails the bombardment of the interactively engaged user with flashes of words, which appear by virtue of movements whose nature is ‘tendre’ and violent by turns, and whose appearance entails the use of many non-traditional modes of inscription, such as graffiti-style images.

Both options constitute interactive devices, and both offer the possibility of generating tales formed from pre-written fragments drawn from the work of various authors. The user creates their own story using pages with which they are provided at the site. Choosing basic elements as points of departure for the creation of the narrative, such as the number of characters, the user proceeds to produce a text in real time, of which all possible versions may not be examined, but of which the visitor may form an impression by reading a select number of the variations produced. The user is asked at various intervals to make certain compositional choices, which then contribute to shaping the final narratives produced.

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<sup>172</sup>Ibid., ‘Séquences à moduler.’

<sup>173</sup>This linking of literature and the tarot is redolent of Italo Calvino, *Il castello dei destini incrociati* (Turin: Einaudi, 1973), whose text is accompanied with prints of tarot cards on almost every page, which have a particular role in both limiting and generating the bases of the narrative in a kind of combinatoric game.

<sup>174</sup>Loc. cit.

The user is also offered the possibility of consulting the original works from which the elements combined in his permutational narrative have been drawn. In this sense, the option to acknowledge and assign importance to the sources of the ‘new’ work is offered. The site thus encourages consideration of the process of rewriting, and the way in which rewriting may only be in any case such a ‘*découpage opéré sur les pré-textes*.’<sup>175</sup> This image of *découpage* is a curious one: as I have suggested earlier, this analogy of generation of texts from pre-existing works treats the latter as a uniform material that may be cut down to size in order to suit the required dimensions of the successive project which will inevitably bear echoes of its antecedent text.

Such an envisagement of textuality, which would conceive of subsequent usage as *découpage*, rather than the more frequent kind of palimpsestual model whereby the newer text overwrites or eclipses the previous one, using the latter as a kind of superseded base, absorbing the prior influences as the author chooses, sees the new text as restricted and enclosed by the model on which it is based, which at once limits and circumscribes the possible forms that might be adopted by the newer text, while also offering these possibilities for renewed interest and emphasis through their recontextualisation.

This notion of *découpage* might imply the subsequent act of creation as one that is simultaneously an act of inevitable destruction of the previous work, by the act of cutting through its integrity for the creation of a new and uncertain scrap. Whereas the palimpsest suggests an inherence and residual accumulation of influence, then, the idea of carving into the work presents a more dramatic break from the presumed sources and the tradition from which the new work would typically inherit some of its properties.

Finally, the term *découpage* is interesting here for its implications of mixed media: the symbols required from the paper work are selectively lifted and recombined into a new work that demonstrates a more complex dimensionality, such as a three-dimensional box, and also includes adornment using other media, such as paint or metallic enamel. In this sense the notion of *découpage* accommodates the idea of text’s movement away from the printed page and its combination with other media much more than the flattening and absorbing figure of the palimpsest.

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<sup>175</sup>Loc. cit.

*Découpage* thus bears a kind of liberating quality that also resonates more with the dimensional play with textuality to be undertaken from these years onwards.

The idea of textual recuperation and fragmentation also traverses the ‘Romans à faire’ site, created by Francis Debyser and others. This site housed a ‘fiction télématique,’ to be (re-)composed from clues and fragments offered to visitors to the site.<sup>176</sup> The ‘spectator’ must assume the role of Isis in the Osiris myth, reassembling a narrative analogous to the body of the latter. The site visitors are provided with actions, events, characters and general considerations from which the story – that of a novel, entitled *L’Objet perdu*, may be constructed. In the first phase, the reader-composer is introduced to a number of the possible trajectories in which the narrative may potentially unfold. The second phase, however, informs the reader of a partial destruction of what they have read in the previous phase. The third phase thus encourages the reader to construct a story based on the ‘remains’ of this evidence. Each reader thus has her own, specific route through the work.

The other work hosted at the ‘Romans à faire’ site is a telematic fiction entitled ‘Jus d’orange.’ This work is at once a ‘traditional’ detective story, based on a central case, and a ‘romancier,’ or computer programme resembling a novel, which allows for various readings based on the reader’s choices and the lines of investigation that they select. The traversal of this series of choices finally leads the reader to two different solutions. Each of the novel’s 476 screens contains fewer than fifteen lines of text, with each screen presenting one or two clues. The reader’s choices thus revolve around the cross-checking of these clues, deciding the order of the questioning of witnesses, consulting and commenting on documents, trying to solve the enigma, as well as resolving particular challenges that are directed at the reader. The site thus presents two ludic narratives, each of which may be read in multiple ways, and the content of the narrative provides triggers for the reader’s decisions in each case.

Visitors approaching the ‘Machines stylistiques’ site were offered the possibility to engage with generative textualities as these had been explored by the Oulipo and Alamo in previous years. The site took up, according to its description in the *Album*, the ‘vielle idée des règles en littérature.’<sup>177</sup> This site was created by the

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<sup>176</sup> *Album*, ‘Romans à faire.’ Archives du Centre Pompidou.

<sup>177</sup> *Album*, ‘Machines stylistiques.’ Archives du Centre Pompidou.

Alamo group, who presented their programmes for the creation of tales, fables, haikus, and Baudelairean prose. These programmes allow for the machine to be given control over the constraints that are typically used to govern the composition of such works, whereas the visitor, interacting with the site, is left to determine the remaining ‘libertés’ of the works.

The user of the programme is thus encouraged to assume the role of the author, discounting the authorship of the rules, which is delegated to the machine. The site’s operation is described in the *Album* as threefold: the first and simplest level on which writing is explored is that of combinatoric composition. The works engaged with on this basic level all consist of pre-written texts, which are combined at the site of ‘wreading’ either by means of aleatory methods, such as using the ‘Scénario’ programme, or interactively, based on selections and choices made by the reader-author.

The next, and more complex, level on which works presented are engaged with by visitors to the site is described as ‘applicationnel,’ a mode whereby abstract ‘moulds’ operate such as to dictate roughly the syntactic compatibilities of the text’s components, governing to some extent how the work may be assembled. The constraints that come into play thus operate on a more detailed level than is the case for the first sets of combinatoric works, insofar as syntactic and stylistic constraints may be more precisely imposed.

The Alamo’s *Rimbaudelaires* and Marcel Bénabou’s *Aphorismes* were presented as examples of works corresponding to this category of text. Finally, the inferential level is the third and most complex form of text generation that was presented at the site. The works exhibited consisted of pre-assembled lexical elements, automatic syntactic structure generation programmes, and macrotextual structures, such that the machine may generate an infinite number of texts of a given stylistic type.

Examples of this kind of generation are demonstrated in the forms of the *Alexandrins artificiels* and *Nouvelles à votre façon*. All of the works at the ‘machines stylistiques’ site were conceived as ‘texte évanescent’ or ‘texte dematerialisé,’ insofar as they consisted of works that were all the time shifting in terms of their content and form based on the reading/writings carried out on them by the exhibition visitors. Paul Braffort and Jacques Roubaud were closely involved in the creation of these works, as

well as Jean Pierre Balpe, who was still involved with the activities of the Alamo at this time, but was soon to distance himself.<sup>178</sup>

Moving towards a more synaesthetic experience of textuality and voice, the site 'Champ et mouvement de la voix' examined possibilities for visual and spatial inscription of the reading voice, thus giving a kind of demonstrable form to the reader's encounter with the written text. A spectrograph is used in one part of the site to decompose the acoustic variables of sound. Performances of oral poetry are thus depicted with the idea of allowing the visual imagery corresponding to the reader's voice to suggest and prolong the powers of the voice in the memory and the imagination.

Presenting poetic works in this way is framed as an effort to open the poetic field to a space beyond the printed page. In one of the videos shown at the site, 'Les mots sont des objets,' the aesthetic effects applied to the texts presented include one effect that resembles a kind of encrustation (which plays on the background and foreground of the screen, insinuating a kind of depth in the space of representation), as well as the drawing of traces of varying speeds which depict the movement of the voice 'across' the screen, the use of colour, form and light, and changes between sound and image. In 'Trace du voix,' the second video at the site, colour is used to denote the intensity and frequency of the voice. The spectrograph detects complex sonar episodes, decomposing these and presenting them as simple sounds on the screen. The screen thus displays spectrograms of the sound of an oboe, clarinet and isolated vowel.

A full site is also dedicated to the *Épreuves d'écriture* project, which I shall discuss in greater detail in the next section. The project, which I have already mentioned briefly, consisted essentially of a large number of author-commentators producing an ongoing series of intersecting comments based on a given set of keywords, which had been chosen by Lyotard at the outset of the experiment and given to participants as a list.

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<sup>178</sup>The reason for Balpe's departure from the Alamo is given in an interview with Balpe, according to Saskia Reither, *Computerpoesie: Studien zur Modifikation poetischer Text durch den Computer* (Bielefeld: Transcript, 2003), p.264: 'des gens de l'OuLiPo, qui sont restés à l'Alamo ont voulu faire de l'OuLiPo à l'Alamo, et ils n'ont pas fait grande chose, ça ne marche pas beaucoup, et puis, moi, j'ai quitté l'Alamo justement parce que je n'étais pas d'accord sur ce plan-là, c'est-à-dire, que l'informatique littéraire 'a pas besoin des jeux oulipiens. Elle a d'autres bases.'



The project was given two months to unfold, throughout which the participants sent their contributions to each other telematically. As I shall explain in the next section, the experiment was open to consultation by visitors to *Les Immatériaux*, and as I have mentioned earlier in this chapter, the ‘results’ of the experiment or the commentaries engendered by it were printed in a publication bearing the same title as the experiment and its site. The transition from this communicative proliferation of mutual interference to a print work entailed a kind of ‘traumatisme de l’écrivain,’ undoing the usual hegemonies and divisions entailed in written composition.<sup>179</sup> I shall now turn to a closer examination of the experiment and the elements at work therein.

### **The setup of the ‘Épreuves d’Écriture’ experiment**

Lyotard, in orchestrating the collective writing project *Épreuves d’écriture*, was not merely aiming to create an imprint of the dissolution of individual authorship or of enclosed print forms, but was also striving to reveal and exhibit the polysemy of language, through the juxtaposition of the multiple contributions on the set subjects, undermining the apparent semantic fixity of his chosen terms. In this sense, the ambitions of the experiment represent much grander ones than can be discerned in the exhibition’s other writing sites, insofar as it actually sought and expected a multiplication and complexification, rather than a reductive (re)arrangement of the original text fragments from which the experiment was created.

In the vision of the experiment’s organisers, as they explain in ‘La raison des *Épreuves*,’ the preface that introduces the printed results of the experiment, the work produced would demonstrate ‘une démultiplication des champs sémantiques engendrés par un mot.’<sup>180</sup> Lyotard and Chaput explain “Nous voulions ainsi créer un atelier des divergences et non, comme c’est le cas dans un dictionnaire (ou un catalogue), un musée des consensus.”<sup>181</sup> The use of the term ‘atelier’ is significant here, and rather akin to the Oulipo’s ‘ouvroir,’ and of course echoing the ‘atelier’ of the Alamo’s title directly: it denotes an operational space of combination, assembly and instrumentality, of modification and experiment, as opposed to a curated, finished space, closed to any possibilities of enhancement or adaptation.

<sup>179</sup>*Album*, ‘Épreuves d’écriture.’ Archives du Centre Pompidou

<sup>180</sup>‘Épreuves d’écriture,’ p.6.

<sup>181</sup>Loc. cit.

The image of the workshop also connotes reconfiguration and repair, the revisitation of a previous workman's doings and the enactment or implementation of a subsequent perspective. The experiment may thus be read as the one that most evidently approaches the procedural aesthetic that was to emerge in the years after the exhibition, insofar as, more than any of the other writing sites, its interest is located in the creation of discord by virtue of its ongoing, dispersed, multiply edited and remotely organised nature, without any invasive sense of the final work into which these verbal effusions should ultimately be harnessed and fixed.

Lyotard imagines this endeavour of collective writing as an experiment whereby thought and writing would be 'exposés à ce hasard des interférences bizarres non pas dans leur état d'oeuvre faite, dans le texte qu'elles ont enfanté, mais lorsqu'elles sont en train de se former, à l'état naissant.'<sup>182</sup> Each of the participants, or 'victimes,' as Lyotard describes those who took part in his experiment, was given a microcomputer on which appropriate word processing software had been installed. Each participant thus had a personal Olivetti M20, consisting of a main unit, screen, double disc reader, and a unit that allowed for connection to the PTT ('push to talk') network.<sup>183</sup> Meanwhile, at the Centre Pompidou, an Olivetti M24 computer received calls from these 'authors'. A maximum of three simultaneous communications could be accepted, whereby the authors would submit their texts and could receive those of their collaborators.

A centralised memory, stored on a high-capacity disc, was used to record the original fifty words and the comments that these had invited from the participating writers. This cumulative quality contributed to the experiment's productive spirit, with contributions gleaned and stored carefully as they were made, rather than running their course as they would in the case of ephemeral text forms, whose text components only appear for long enough for them to be read or not even that, before receding back into a presumed space of inexhaustible compositional potential.

The authors each received a list of rules and guidelines, which explained that the words supplied were all connected to the scope and conception of the *Immatériaux*

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<sup>182</sup>Loc. cit.

<sup>183</sup>PTT, denoting either 'push to talk' or 'press to transmit,' is a method of conversing on half-duplex communication lines, such as two-way radio, using a momentary button to switch from voice reception mode to transmit mode. Wikipedia, *Push to talk* (date unavailable)  
<<https://en.wikipedia.org/wiki/Push-to-talk>> [accessed 16 March 2018].

exhibition.<sup>184</sup> The authors were then invited to elaborate their own definitions on paper, of two to ten lines, based on fifteen to twenty of these terms.

The existence of this handwritten source has interesting implications in terms of the ‘Maternité’ notion under which the site was to be considered, and the way in which this preparation with pen and paper blocks a reading of the experiment as an early example of a ‘digital born’ work. These definitions, once committed to paper, were then recorded and stored on the central memory, which the authors could subsequently access using a ‘machine de traitement de texte,’ which was made available to them for the whole duration of the exhibition.

Each author’s machine was connected to the others by a common network. The idea behind this interconnection of tools was thus that the authors could collectively ‘interfere’ with and elaborate on each other’s contributions, refuting, completing and modifying these as they saw fit. The organizers of the experiment were particularly interested in collecting comments from the authors that accompanied these modifications and interventions.

The series of interactive communications that gave rise to the publication *Épreuves d’écriture*, Lyotard and Chaput explain in the preface to the published experiment, took place between September and December 1984, and the results of the technologically mediated discussion were produced unedited, apart from the correction of errors that had arisen due to faults in transmission.<sup>185</sup> The version of *Épreuves d’écriture* exhibited at *Les Immatériaux* was therefore prepared in advance, rather than representing a text that was evolving in real time, and the PTT network supported consultation of the Work, rather than contribution to the Text.<sup>186</sup> Though the version of these results available for consultation today is a finalised, print document (or a PDF file, in the case of the digital version), at the time of *Les Immatériaux* the collective work could be viewed in the process of its evolution on the main monitor at the *Épreuves d’écriture* site, as well as outside of the Centre Pompidou, on the Minitels that were part of the PPT network, for the duration of the exhibition.

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<sup>184</sup>This prefacing of the composition process with lexical constraints is redolent of Oulipo’s methods.

<sup>185</sup>Later, in the wake of Balpe’s procedural aesthetics, such ‘errors’ would have been embraced as part of the authorial input of the technology of transmission.

<sup>186</sup>‘Épreuves d’Écriture.’

Five Minitels were symbolically connected to a central unit at the *Épreuves d'écriture* site, on which the original texts produced by the twenty-six participating 'authors' could be viewed and read.<sup>187</sup> As I noted earlier, at the exhibition site, visitors were offered the options of searching these texts by keyword (of which there were fifty in total) or by author.

In *Épreuves d'écriture*, then, as with many other texts that strive to create a particular, undifferentiated or enmeshed form of textuality, the effort instead may be seen to transform into the creation of a plurality of alternative structures that coexist and complement one another. Technology may be seen in this example as at once facilitating the pluralisation and dispersal of renderings and also allowing for the careful categorisation and subsequent imposition of order on these reams of text.

Antony Hudek writes of *Épreuves d'écriture*, paying particular attention to the engagement of Jacques Derrida with the experiment.<sup>188</sup> Hudek depicts Derrida's acceptance to participate in the experiment as troubled, not necessarily by the collaborative or dispersed nature of the writing exercise required of the participants, but rather more by the invasive, physical presence of the equipment that formed a crucial part of this process. Hudek writes of Derrida's experience as follows:

'I installed this machine at home,' recalls Derrida, 'and when it entered this house, I had the impression that one had introduced a monster.' And *naturally* I was absolutely incapable of using it. I gave up, and told the organisers that I would write on my electric typewriter...<sup>189</sup>

The 26 participants involved in the *Épreuves d'écriture* experiment were connected via individual personal computers over a period of two months. Derrida, Hudek clarifies, continued as a participant following this rejection of the Olivetti machine, working on his typewriter and subsequently having the entries he conceived on this digitised, so as to be compatible with and integrated into the format of the experimental text.<sup>190</sup>

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<sup>187</sup> *30 Years*, pp.16-17.

<sup>188</sup> Antony Hudek, 'The Affective Economy of the Lyotardian Archive,' in *Rereading Jean-François Lyotard*, pp.11-24.

<sup>189</sup> *Ibid.*, p.16. Emphasis added.

<sup>190</sup> *Ibid.*, p.20.

Derrida's case suggests that each of the participants in the *Épreuves d'écriture* project drew from the experience particular points and considerations which they then related to their own individual thinking and composition, rather than engaging with the wholly collective development of a pooled and polysemic piece of work, closer to what Lyotard had envisioned.

For Wunderlich, *Épreuves d'écriture* was an experiment that demonstrated the ease with which the apparent mastery of the author could be undermined, by chipping away at his text with slight, but unlimited and ongoing, edits.<sup>191</sup> This gesture of undermining was nonetheless temporary, superficial, and carefully established, and manifested itself as a facet observable within the work created, rather than a result of the interactions that endured beyond the experiment and bled into the work of the authors who had taken part. Certainly, something more subtle was taking place here than the release of *texte* from *oeuvre*, as both the past and potential of the latter, and closer to the exposed fabrication of a plural, procedural, enmeshed anthology, whereby multiple author's marks were ordered into a growing succession of texts.

### **Literature as soundtrack**

The audio soundtrack that was made for the exhibition and, heard through the individual headsets worn by each exhibition visitor, specifically intended to permeate most of the sites of *Les Immatériaux* (the *Épreuves d'écriture* site, for example, was unaccompanied by a soundtrack) represents a crucial consideration when looking back on the layout of the exhibition and attempting to reconstruct some impressions of the experiences engendered thereby. Moreover, the texts recorded as part of the soundtrack represent arguably the most literal immaterialisation or neomaterial rendering of literary texts across the exhibition. To be sure, this carefully curated array of sounds and oral readings was a factor that conditioned each visitor's experience of the sites.

The soundtrack was heard through the individual headsets that acted at once as isolating and homogenising mechanisms, maintaining the comparability of the listeners' experience of the visit through the careful control of the sounds to which

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<sup>191</sup>*Der Philosoph*, p.61. 'Vor allem die Autorität des Autors (Maternité) werde durch das Experiment der *Épreuves* stark hinterfragt. Das Thema seines Textes spiele eine Nebenrolle das strenge Regelwerk zur Erzeugung der Texte sei es das viel stärker ins Gewicht falle...Die Meisterschaft des Autors über sein Schrifttum erscheint illusorisch.'

they were to be exposed, at the same time as wrapping them in their own personal experience thereof for the duration of their interactions with the sites.

In addition to the more conventional use of musical clips and sound art, the use of aural readings of literary and philosophical texts interwoven with these represents a layering of media and materialities that calls for careful attention.<sup>192</sup> The text segments used in the soundtracks of *Les Immatériaux* were arranged in a highly systematic way and, rather than allowing these to intervene at random as the exhibition visitor makes her way through the sites freely, the soundtrack parts that corresponded to each site were carefully anchored at each post, so that as the visitor entered the site their headphones would pick up the intended text for that site by a kind of radio wave transmission system.<sup>193</sup>

Nonetheless, how the correspondence of these soundtrack sequences with the sites they were intended to accompany was to be achieved must have been quite unclear to exhibition visitors, given that they were encouraged to navigate the sites of the labyrinthine space without particular instructions on the order in which they were to experience these. By all appearances, visitors only worked out how the audio components corresponded to the sites little by little, and it was through immersion in the same that the guidelines were transmitted.<sup>194</sup>

Johannes Birringer is quoted in Wunderlich as explaining that: ‘One’s first impression of the exhibition then, had to do with the uncertainty of the itinerary and the unsettling experience of audio-visual juxtapositions.’<sup>195</sup> Indeed, the visitor’s disorientation was no doubt compounded by the fact that they were to peruse the exhibition in semi-darkness, so as to see its TV and computer screens, cine-holograms, videos and documentaries more clearly.<sup>196</sup>

Indeed, the selection of the soundtrack’s texts was far from arbitrary, nor were the texts of the soundtrack intended to be experienced *sur place* and then omitted from the main, visualised details of the exhibition. These texts are rather included in

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<sup>192</sup>Wunderlich notes that for non-Francophone visitors to the exhibition, a 24-page booklet was available in which translations of the texts read in French as parts of the soundtrack to *Les Immatériaux* were supplied, p.66.

<sup>193</sup>*Biennials and Beyond*, p.215, ‘...the segments beginning automatically on entering each area...’; p.223, ‘On this level there will be twenty to thirty radio transmitters, each one covering a carefully limited zone.’

<sup>194</sup>*Der Philosoph*, p.51. Texts guided the visitor to the site to which they pertained.

<sup>195</sup>*Ibid.*, p.8-9.

<sup>196</sup>Francesca Gallo, *Ce n’est pas une exposition, mais une œuvre d’art. L’exemple des Immatériaux de Jean-François Lyotard* (2012) <<http://www.appareil.revues.org/860>> [accessed 6 March 2018].

the listings of works that composed the exhibition: the final pages of the *Album* contain accordingly a list of ‘textes et voix,’ whereby the written works incorporated in the exhibition soundtrack are listed by work and site titles.

This aspect of the exhibition’s curation, the tightly maintained correspondence between the thematic soundtrack and the sites to which it referred, represents a certain tension between the curators’ intention that visitors experience the works on display by way of a free and autonomous trajectory of their own creation: the localisation of specific texts to accompany specific works, and the effect of the immersion created by the headphones encapsulated these explorations somewhat, and presumably factors such as the duration of the soundtrack being played led or obliged visitors to dwell on certain sites or works for longer than they would have necessarily chosen to, in the interests of gaining a ‘complete’ exposure to the exhibition’s constituent parts.

Texts and readings were thus paired with the visual and conceptual elements of the different sites, so as to create particular resonances between the aural and the visual. It is noted in *Biennials and Beyond*, and worth taking into consideration, that the headsets used at *Les Immatériaux* were prototypes supplied by the electronics company Philips, and not unknown to malfunction due to technical glitches.<sup>197</sup> This was not a deliberate effect created due to engagement by the exhibition curators with the ‘esthétique de la frustration,’ although the difficulty of synchronising the various elements and types of work being received by the exhibition visitor from various media sources is not counter to the spirit of ubiquitous and almost involuntary phenomenological layering *Les Immatériaux* was attempting to capture.<sup>198</sup>

To illustrate something of this synchronisation of themes between the audio and visual aspects of the sites, I shall draw on an example of the way in which texts were matched with the artworks on display at the sites. At zone 20 of the exhibition, entitled ‘Arôme simulé,’ pieces of olfactory art are placed on display. These are unusual amid the physical works present at the exhibition, which tend to appeal to

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<sup>197</sup>Ibid., p.219.

<sup>198</sup>For a definition and discussion of the ‘esthétique de la frustration,’ see article below: ‘L’esthétique de la frustration est une forme numérique. Elle apparût en 1996 dans *Stances à Hélène* (Philippe Bootz et Marc Battier). Elle est aujourd’hui largement pratiquée par les auteurs français. Elle utilise la déception, la frustration, l’échec de lecture... du lecteur, autant de situations négatives que, d’ordinaire, un auteur tente d’éviter.’ Philippe Bootz, *Qu’apporte l’interactivité à la littérature numérique?* (2006) <[https://www.olats.org/livresetudes/basiques/litteraturenumerique/4\\_basiquesLN.php](https://www.olats.org/livresetudes/basiques/litteraturenumerique/4_basiquesLN.php)> [accessed 6 March 2018].

ocularcentric modes of experience: film clips, visual art, sculpture, etc. As the literary works are dissolved in the soundtrack into works to be experienced aurally, something similar is at work at the ‘Arôme simulé’ site, whose works prompt the reader to explore via their sense of smell. The literary work that plays on the visitor’s headphones also concentrates on the sense of smell: the passage from Bioy Casares renders fragrance in words: ‘Si vous ouvrez le récepteur des ondes olfactives, vous respirez le parfum du bouquet de jasmin que madeleine porte à son corsage, sans le voir, elle.’

The words of the soundtrack may thus be seen as detached from their original narrative context and drawn upon insofar as the occurrence of certain words: ‘olfactives,’ ‘respirez,’ ‘parfum,’ ‘bouquet,’ etc. creates a kind of bolstering resonance with the work on display, perhaps the text is even mobilised in such a way as to appear to motivate and guide the visitor on some subconscious level, with echoes of ‘past’ literary experiences of olfactory experience informing the encounter with an olfactory encounter in the present.

Wunderlich describes a site at which a poem by Jacques Roubaud is heard as the soundtrack to a visual work that appears as a hologram.<sup>199</sup> The anterior resonance of the literary work in this juxtaposition is curious, considering the Oulipo group’s ambitions, expressed by its co-founder François Le Lionnais, whom I quote in the first chapter of this thesis, to create literary works in forms beyond the two-dimensional limitations of the printed page.<sup>200</sup> Le Lionnais specifically mentions holograms as a promising form for the dimensional renewal of the literary work. The soundtrack listings in the *Album* pair texts with the sites at which they were played. This documentation of the intended correspondences between sound, text and site is a valuable resource for looking back on the exhibition.

At the ‘Labyrinthe du langage’ site, for instance, the listener heard a reading of Jorge Luis Borges’ ‘La bibliothèque de Babel.’ The incorporation of soundtrack texts comes closer to a more provocative usage in the case of some sites that were accompanied by more than one text, allowing for more thematic intersection and interference: such is the case of the ‘Précuisiné-Préparlé’ site, to which both Roland

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<sup>199</sup>Ibid., p.206.

<sup>200</sup>François Le Lionnais, ‘Holopoèmes’ in *Oulipo: La Littérature Potentielle*, p.286.



Barthes' *L'Empire des signes* and Lewis Carroll's *De l'autre côté du miroir* were linked.

These soundtracks have been preserved at the Bibliothèque Kandinsky of the Centre Pompidou, a gesture of preservation and materialisation which curiously reinstalls these immaterialised texts – from their initial 'release' from the print book into waves of sound - to the status of a measurable, recorded work that may be consulted in a library.<sup>201</sup>

In the exhibition overall, there is a tendency for literary and theoretical texts to be positioned as anterior or counter to the visual elements of the exhibition. The description provided of *Les Immatériaux* in *Biennials and Beyond* underscores the improbable role of the *bande sonore*, which constitutes the opposite function of that which might reasonably be expected of a traditional museum audioguide.<sup>202</sup> Rather than an instructive clarification that accompanies each site in a clear way, the texts of the *bande sonore* are put to deliberate obfuscatory effect, and yet the selection of specific texts for the different sites suggests this layering is not as arbitrary as the grappling experience thereof might suggest.

The canonical or classic status of many of the texts suggested for the soundtrack of *Les Immatériaux* accentuates this distinction between the visible and plastic pieces on display as contemporary and suggestively futuristic, relegating literary text to a more anterior space. While the immateriality of plastic and visual works at the exhibition strives towards an imagining of potential and impending neomaterialities, then, the immateriality of literary texts as these are read, heard, and regurgitated in the exhibition may be considered akin to that of a fading voice.

On a more generous note, Wunderlich ascribes the use of the soundtrack to the exhibition's attempt to create a kind of metasystem, a reading according to which the readings and sound pieces heard by the exhibition visitor on her headphones were not 'behind' the main works on display but rather part of an overall metasystem.<sup>203</sup> The implications of such a positioning of literary space as not pocketed within, but rather uniformly layered over, the direct experience of the reader/user, still rooted in her

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<sup>201</sup>On visiting the Bibliothèque Kandinsky in December 2016, I was told that the digitisation of the entire *bande sonore* of *Les Immatériaux* was underway.

<sup>202</sup>*Biennials and Beyond*, p.215 'With an audioguide lacking readily understandable interpretations, exhibits positioned within an obscure conceptual narrative, and a physical arrangement with no predetermined path, 'Les Immatériaux' mystified the public.'

<sup>203</sup>*Der Philosoph*, p.51.

own immediate physical reality, is a very interesting one. I shall be exploring some more recent metapoetics models akin to this one in the final chapter of this thesis.

## **Conclusion**

Rajchman has argued that '*Les Immatériaux* was a phenomenologist's nightmare; everywhere one was shown the replacement of the material activities of the 'lived body' with artificial ones, or with formal or immaterial languages.'<sup>204</sup> While this may be true of the items on display at the exhibition, the enveloping of the exhibition visitor in a space ostensibly bereft of the signs of human craftsmanship and intervention has what I argue to be a kind of hyperbolically physical implication for the individual as they contemplate these zones and objects.

Indeed, the (in any case, purported) emptying of the exhibition spaces of the usual signs of manual and human creation in fact bestows an obligation on the individual visitor to engage with the works on show in various interactive and sensorially engaged ways, to a greater extent than in other exhibition contexts. The isolation of the individual visitor from others engaged in parallel, but quite emphatically separate, explorations contributes much to this sense of an autonomous impulsion to inhale, inscribe, observe and receive the messages embedded in the various sites they traverse, as well as creating works to be left at the sites in their wake, as was the case at the generated literature sites, for example.

If anything, then, it might be said that *Les Immatériaux* was set up as a phenomenologically overwhelming sequence of experiences, which supplied the visitor with a broad range of invitations to participate in the works on display as a crucial and integral bodily interlocutor. I have argued here that, given the prominent place assigned to writing in *Les Immatériaux*, evident in many areas of the exhibition, and not least in the uniquely exploratory status of the collaborative project *Épreuves d'écriture*, the events and experiments represented an important milestone for experimental and computer-assisted literary practices in France, and those individuals and groups involved in such forms of creation.<sup>205</sup>

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<sup>204</sup>Rajchman quoted in *Der Philosoph*, p.235.

<sup>205</sup>Hui and Broeckmann recall in their Introduction to *30 years* that 'Épreuves d'écriture' was 'probably one of the earliest collective and networked writing experiences, presented to the public when the computer was not yet popular.' *Ibid.*, p.17.

While textuality was arguably explored in pioneering, phenomenological ways at the exhibition, the adjacent works and art forms gradually introduced the question of a more narratively entwined phenomenology for new media texts. The works I shall discuss in the chapters to come exhibit some of the results of endeavours to create this kind of work. I hope, despite assigning much significance to *Les Immatériaux* in its catalysis of digital literary innovation both in the French context and beyond, to have made clear in the two chapters preceding this one that this notion of exhibiting such forms of text was at this stage hardly a new concept, and indeed had been very much a feature of the Oulipo group's promotion of its works since well before the 1980s.

The conduciveness of assisted literary forms to the exhibition context may be understood as largely due to the possibility of accompanying the public in their discovery of these kinds of works, as well as ensuring the presence of those familiar with the methodologies required in order to engage with the texts prepared. Indeed, the shift away from complete literary forms as works to be consumed individually and privately in favour of open and unstable works, their content ever-changing in response to the manipulations of the reader, may be seen as facilitated by the very crucial opportunity to present the kinds of interactions envisaged by practitioners in this kind of context.

That is not to say that electronic works destined for a *lecture privée* were not being produced in France at this time, as I have noted in the second chapter with my discussion of the reviews *alire* and *KAOS*, but it might be considered that the kinds of approaches to these texts, even as they were read by readers in their homes, were informed by the prior experience of exhibited texts. One good example of this is the work of Tibor Papp, which was made in forms suitable both for exhibition and private reading. Papp's *Les très riches heures de l'ordinateur*, for example, was shown at the "Polynix 5" exhibition at the Centre Pompidou in 1985 and another, similar work of his was later published in the review *alire* in 1994: presumably a very similar and largely overlapping audience was attending such events and aware of the appearance of these reviews.<sup>206</sup>

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<sup>206</sup>*Media Poetry: An International Anthology*, ed. by Eduardo Kac (Bristol, UK; Chicago, USA: Intellect Books, 2007), p.276.  
Issue 7 of *Alire*, 1994 (Kac, p.227).

The way in which the majority of texts presented at *Les Immatériaux* were displayed, then, as I have suggested earlier, represented no great novelty or advancement relative to those works previously exhibited by the Oulipo or Alamo, for example, at events such as the *Europalia* festival in Brussels.<sup>207</sup> Indeed, the kinds of generated and combinatoric works present at some of the exhibition's sites, such as the *Rimbaudelaires* and similar forms, were very much in the same vein as the kinds of works these groups had been presenting to the public for many years at this stage.

What was notable about *Les Immatériaux*, then, in this regard is its situation at a kind of turning point for these textual forms: the exhibition demonstrated the progress that had hitherto been made with methods such as syntactic modelling and permutational programs, and this in relation to the surrounding works and art forms seemed to suggest the urgency of new and less restrictive forms for assisted literature, which would better represent the intermedia aspect and the evolving quality or fluidity of works being created in other artistic fields.

The kinds of valency observed in other artistic works with further, distinct yet compatible, forms appeared absent in the self-contained experimental texts shown at *Les Immatériaux*, a kind of openness and agility that also came to be considered generally desirable in the new mode of composition that was to be developed. Jean-Pierre Balpe was to be a hugely pivotal figure in his revision of the aesthetics of assisted texts.

Indeed, as mentioned earlier, Balpe's departure from the Alamo was motivated by dissatisfaction with assisted composition as it was practiced within the group. *Les Immatériaux* thus assisted the gradual transition already underway which diverted the consideration of textual structure from an internal and enclosed one outward, combining this set of concerns into the overarching question of how better textuality and narrative might interact with possibilities offered by space and dimensionality, as well as those of the nascent and new materialities of the digital age.

One major consideration in thinking about procedural and networked writing at the time of *Les Immatériaux* is the fact that the Internet was not yet functional as a space for the distribution and elaboration of interactive works. A site mentioned in

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<sup>207</sup>See Chapter 1 of this thesis for details of the *Europalia* festival and the works presented there by the OuLiPo.

Gallo's 'Contemporary Art as an *Immatériaux*' describes the anticipation of possibilities that would later be created by the growth of the web.<sup>208</sup>

The work in question, Roy Ascott's contribution to *Les Immatériaux, Organ et fonction d'Alice au Pays des merveilles*, allowed inhabitants of the Île-de-France to intervene by altering the text from home. This merging of the *lecture privée* and the erosion of the distinction between the public, exhibited work and the privately viewed and modified text perfectly anticipates the kind of spatial straddling to which textuality is shortly subjected in the navigation of new digital territories for textual forms.

A final word, then, on what examples such as that of 'Épreuves d'écriture' demonstrate about the space between Text and Work. Barthes' idea of the Text as purely 'champ méthodologique' to some degree shows how the Text inverts the literary paradigm established as Work, such that form and compositional questions are discussed often to the exclusion of intradiegetic components. It is, then, not in production but in the matter of recognising and preserving certain Texts that precedents are lacking – this is clear from the experimental transition of 'Épreuves d'écriture,' to a publication, a process which clearly demonstrates that concessions are inevitably made to the *oeuvre*.

Most strikingly, the errors of transmission that arose in the experiment, for instance, were edited out of the publication of 'Épreuves d'écriture': but surely these glitches were essential to the experience of Text as process, only omitted as they could not be ascribed to any influence of deliberate authorship. This sense of certain such elements being inappropriate to the realm of the Work furthermore shows up the *oeuvre* as a 'champ méthodologique' of its own, albeit a dominant and less frequently questioned one than that of its procedural other.

As I have outlined in my overall introduction, the first three chapters examine material aspects of the development of computer-assisted literatures and their related aesthetics. These chapters constitute a first part, focused on the earlier stages of the development of such literatures, a period that extends from the early 1960's to the mid-1980's.

In the next three chapters, I shall examine more recent works of digital literature, mainly created post-2000 and in French. I shall specifically investigate how

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<sup>208</sup>30 Years, p.135.

physical and phenomenological factors have come to inform the structural and spatial elaboration of these textual forms.

***Part Two: Physical and Material Considerations in French Texts post-2000***

## Chapter 4

### Embodiment and Neomateriality in Annie Abrahams' *Séparation* and Xavier Malbreil's *Livre des Morts*

#### Introduction

In this chapter, I shall discuss two recent online, interactive works, both emerging from the French context. Each of the texts I shall be discussing prompts the reader to reflect upon her own physical and spatial situation, through the guiding influence of textualities, formats and themes whose characteristics bear a kind of immaterial quality by contradistinction to the physical awareness that they simultaneously strive to engender.

These texts thus establish a relationship of experiential divergence or contrast whereby the apparent fragility and ephemeral quality of the online digital work are mobilised in order to bring about a heightened sensitivity to individual and relative physicality and embodied experience to the reader of the texts. Conversely, the material delicacy and comparatively weightless quality of the digital work, together with the immersive capacities of the same, are drawn upon in the case of each work I shall discuss in order to gesture to an alternate form of physical experience, whereby the structure, weight and familiarity of the human body are deliberately rendered inapplicable, or rather the reader is forced to think beyond these tangible confines.

The text thus forces the reader to contemplate a spatial existence beyond the familiar confines of their current body, immersively creating alternate forms that are experienced by way of a carefully synthesised digital consciousness. I shall present the two works here before proceeding to compare these.

#### *Séparation*

Annie Abrahams' animated text, *Séparation* (2002), was inspired by the author's personal experience as a sufferer from repetitive strain injury (RSI), related to the incorrect use of computing equipment, of whose detrimental effect the author had



previously been unaware.<sup>209</sup> The text was originally created during the author's stay in a hospital in 2001, at which time Abrahams was learning and experiencing the treatments and exercises required to both prevent and treat RSI.

The presentation of the text reminds its readers that "All computer workers tend to forget their body," and in this sense everyone is a potential victim of health problems such as RSI.<sup>210</sup> The readers of Abrahams' text, therefore, whether recovering RSI sufferers or vulnerable potential victims, are constrained to click slowly as they interact with the appearing text. Readers are encouraged to perform a series of exercises whose purpose is to restore the a sense of inhabitation of one's own body, as well as physical considerations of rest and care that are sometimes, Abrahams suggests, neglected in favour of an overinvestment of the body *qua* clicking fingers and strained eyes, in the interests of the machine.

Abrahams' text thus presents an ambivalent exploration of the perception of computing equipment as an extension of the body, and orchestrates what is at once an encouragement to read and interact enthusiastically with the material displayed on the screen, but also a caveat and a reminder to pause and take into account the computer user's physical needs. One word appears at a time, at a steady pace, a progression which is occasionally interrupted by the appearance of an exercise that is suggested within the text itself, thereby postponing the reader's progress entirely in favour of stretching their limbs or resting their eyes. The text also supplies feedback on the reader's pace and exertion and, in this sense, it functions as both a diagnosis and a preventative practice.

The fact that the reader's progress is inhibited in favour of physical care or recovery provokes a reflection on the prioritisation of mechanical efficiency over embodied awareness and the preventative measures on whose adoption the efficiency and wellbeing of the human body depends. The text also draws attention to the way in which computing devices are often perceived by the user as an extension of their own body, with the smooth running of one machine considered equivalent to that of the other.

Abrahams' text underscores the distinction between these largely intertwined but ultimately distinct systems, and signals the importance of educating computer

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<sup>209</sup>Annie Abrahams, *Séparation* (2003) <<http://www.bram.org/separation/>> [accessed 6 March 2018].

<sup>210</sup>*Ibid.*

users to orchestrate this interaction in a beneficial, rather than harmful, way. The irony of Abrahams' text, perhaps, is that it employs the same machine that initially or potentially causes damage to positively reinscribe the behaviour of its user thereon: the inevitability of the machine in this sense, and the idea of easing the development of a semiotic relationship with the supply of a corrective *modus operandi*, rather than the total separation of the human from the object of her dependence, evokes the prosthetic and cyborg-like relationship of humans to computers in contemporary society.

This somewhat anxious insight, whereby even the cure is at best a controlled dependence, resonates with Ruth Cutlow's description of Abrahams' internet as a space of 'agitation, collusion, ardour and apprehension'.<sup>211</sup> Reading Abrahams' *Séparation*, the reader is indeed agitated by the slow pace at which the single words of the gradually growing text appear. Clicking overzealously, they are met with a stern message, which covers the screen and prevents further reading:

Vous n'avez pas la bonne attitude devant l'ordinateur:

- Soit vous cliquez trop vite,
- Ou vous cliquez trop fort,
- Ou vos yeux ne sont pas à la hauteur du bord supérieur de l'écran
- Ou vos muscles sont trop tendus.<sup>212</sup>

The reader has no choice, if she wishes to continue reading, but to start reading/composing again more gingerly: any disobedience on her part will be detected by the programme. Regardless of the reader's clicking speed and pressure application, however, the inbuilt exercises of the text still interrupt the work periodically.

These are not total breaks from the content or development of the work, however. For instance, the first of these exercises interrupts the appearance of the text on the cue of the appearance of the word 'douleur': the reader is thereby prompted to depict this 'douleur' physically, enacting an embodied response to the verbal indicators of the text in a kind of semantic layering.

Though the body may be convinced that it is taking a rest from its task, this coercive, inbuilt exercise may in fact be interpreted as a kind of physical

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<sup>211</sup>Ruth Cutlow, *If not you me* (date unavailable) <<http://furtherfield.org/articles/if-not-you-not-me>> [link expired; last accessed 6 March 2018].

<sup>212</sup>Ibid.

manifestation of a paratext which, through the obedient actions demanded of the reader, reinforces the content and authority of the computerised text and the wider work that is shaped by such allusion.<sup>213</sup> The words of the poem that gradually appear also echo intradiegetically the exterior situation to which the text relates 'Pourtant ton corps est devenu le mien...' <sup>214</sup>

The poem characterises the reader as a 'poor being, all alone,' unable to distinguish between itself and the place from which it is being addressed. At a certain point, adjectives such as 'enveloppant' are used to describe this misplaced selfhood, and the reader is encouraged to take a short break in order to stretch their shoulders, countering the natural tendency to hunch the shoulders as one works. The involuntary source of this suggested action, however, further enhances the ambivalent reaction of the reader to these ostensible concessions.

The text thus performs itself through both human and machine media and strives to direct the reader in a kind of fitful oscillation between, firstly, empathising with the notions represented within the text, such as the sensation of 'douleur,' which, when enacted physically, prompts a kind of empathetic apprehension of the text and, following this, a sort of constrained and guided severing of this link, this immersion, in order for the reader to regain a degree of symbolic control over her body, by stretching and countering the hunched efforts made to read and interpret its contents.

The regaining of control in this case, however, as I have argued above, is above all symbolic. The obedient reader, then, never fully immerses herself in the screened text *per se*, forgetting the body and its positions and needs, but rather performs a rather comical oscillation between interpretation of the intradiegetic confusion and physical loss that the poem describes, and the alternate breaks and stretches that suggest physical liberation and autonomy from this neglectful immersion, but instead see the reader moving, puppetlike, at the text's behest.

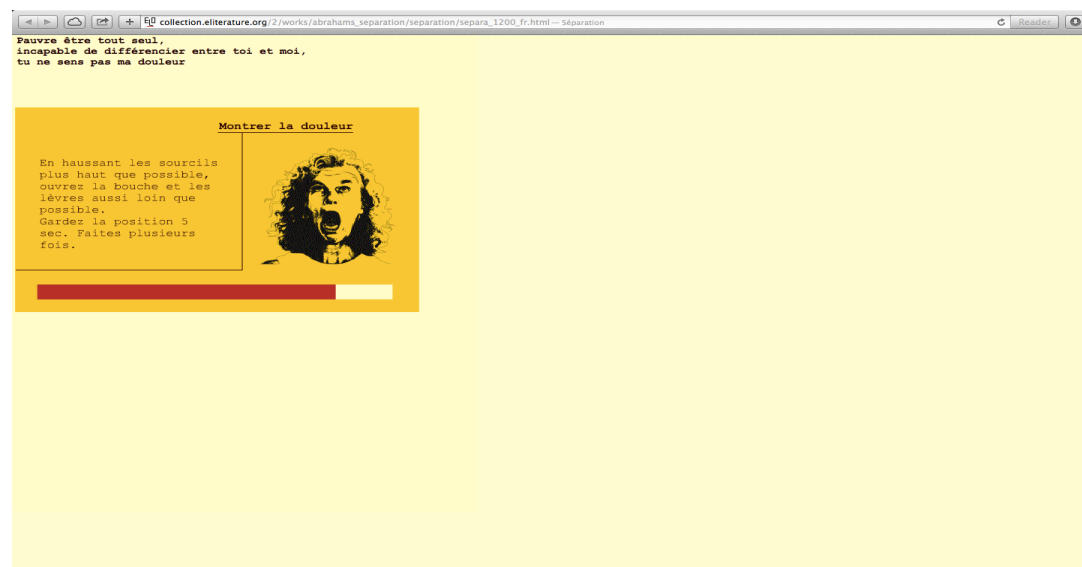
The disobedient reader may nonetheless observe these exercise breaks passively, without engaging in the exercises they are impelled to perform, in a

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<sup>213</sup>The term 'paratext' is defined by Gérard Genette as an element of the published work that accompanies the text, and though it has a kind of peripheral status, it is more an open threshold than a sealed border that delimits the internal content of the work. The paratext is, furthermore, considered by Genette as a space of influence, transaction and strategy that heavily determines the nature of reception of the work as a whole. Gérard Genette, *Seuils* (Paris: Seuil, 1987).

<sup>214</sup>Ibid.

vacillating alternation between the concerns of work and health, yet the exercises are interpreted by them as inherent to the thematic and structural focus of the work.



The above image shows the message, which momentarily interrupts the display of poetry, triggered by the appearance of the word ‘douleur’. The reader is prompted to engage in a physical exercise ‘*Montrer la douleur: En haussant les sourcils plus haut que possible, ouvrez la bouche et les lèvres aussi loin que possible. Garder la position 5 sec. Faites plusieurs fois.*’

As the poetic text is progressively revealed, evoking used and abused muscles within its lines, this tendency for the intermittent exercises to demand physical detachment from the internal, poetic text, as opposed to greater semantic immersion, continues. The reader is invited to place their elbows on their knees and close their eyes. The text, it might be argued, is only representing, rather than truly offering, these liberating moments to the reader, and ultimately the latter is still obeying an immersive textual system and scheme, regardless of whether she performs the actions recommended or simply continue to passively read these messages as components of the text.

The ultimate message that appears towards the poem’s ending is nonetheless one of empowerment of the reader – or indeed, the representation of the reader’s self-liberation within the authoritative, guiding trajectory of the text: ‘A partir d’aujourd’hui je t’utilise et je ne te permettrai plus de prendre le dessus.’ Abrahams’ *Séparation* shares certain qualities with the animated digital literatures that developed from the 1980s onwards in France and were first exemplified by the works of authors such as Tibor Papp and Philippe Bootz: crucially, these literatures are composed not merely of words, but also of broader dynamic and animated elements that interact

with the themes that are represented verbally, lending these further modes of generating meaning.

Abrahams' text also demonstrates a certain maturity in relation to older and more optimistic conceptions of a machine-author or writing machine, which envisioned a role for the machine in authorial practice that would positively contribute thereto by lightening and multiplying the work of the human author, relieving them of the pains of composition. Abrahams' more restrained perception of the authorial relationship to the machine is one that promotes care and caution over this kind of unbridled enthusiasm, typical of earlier authors such as Italo Calvino, who expressed his excitement at the prospect of mechanical assistance for the author in the 1967 essay, 'Cibernetica e fantasmi' ('Cybernetics and Ghosts.')

In a similar way to the treatment of the mechanical dimension that began to characterise animated, computer-assisted texts, such as those created by Tibor Papp in the 1980's, Abrahams encourages an awareness of the machine as a constant and inextricable factor of the processes of textual composition, reading and display, rather than a prior and partial replacement for the writer or a servile tool that will prepare and process the textual material in advance of editing and reading.

The inextricability of technology from the textual work and the intradiegetic contemplation of this technology's role thus likens Abrahams' text to those of her contemporaries, insofar as the presence and prominence of technology is concerned, and the tone in which this technology is incorporated is similar to that of many, more recent electronic works: the practical and cautionary tone in which the machine dimension is presented situates it both within the work thematically and also without, as a constituting feature that circumscribes the reading and composition of the text.

The moderate and pragmatic approach to the machine, which in Abrahams' text is recommended ironically by the computer itself, has a self-referential and cautionary quality that contrasts starkly with the more artistic and abstract texture created by authors such as Jean-Pierre Balpe through their recent works, which tend to mobilise the computer and awareness thereof in a more figurative and inferential way,

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<sup>215</sup>Italo Calvino, 'Cibernetica e fantasmi' in *Una pietra sopra: discorsi di letteratura e società* (Milan: Mondadori, 1995), p.212.

in order to contemplate spatial and semiotic issues such as textual infinity and the labyrinthine nature of computer-based texts.<sup>216</sup>

These concerns are closer to those adopted in Xavier Malbreil's *Livre des Morts*, which I shall discuss in the next section, and those of Serge Bouchardon's texts, which I shall discuss in the next chapters. Whereas Balpe's works tend to explore textuality itself in this manner, Malbreil's text demonstrates a more general treatment of the transience of human experience and the symbols that accompany the contemplation of evolution, transformation and mortality.

Finally, the searching interpolation of the body of the reader of *Séparation* demonstrates the text's currency, compared to the digital texts of the 1980's, which still considered the digital text as a manifestation of an immaterial artistic phenomenon, and the greater inclination of *Séparation* towards a neomaterial aesthetic, whereby both reader and text are caught up in a network of heterogeneous, but connected, material components.

The next text I will discuss, Malbreil's *Livre des Morts*, similarly to Abrahams' work, may be seen also to encourage the reader to interact with the text in a personal way, inscribing sensory and autobiographical details upon the text. Malbreil wishes for his readers to undertake this reflection in the form of written notes, as distinct from Abrahams' more extroverted gestural routine, within a more explicitly broad, dynamic and lively assemblage of multimedia elements that allude to universal experience and the presence of a spatio-temporal infinity.

### **Le Livre des Morts**

The *Livre des Morts* is the work of Xavier Malbreil, who composed the textual components, and Gérard Dalmon, who created the accompanying visual and sound elements. "Ce que nous propose Xavier Malbreil," writes Serge Bouchardon of the *Livre des Morts*, 'c'est une mort fictive qui soit pour nous un commencement narrative: nous nous livrons alors à une "mise en intrigue," dans le cadre de la fiction, de notre propre vie, qui nous aidera peut-être à saisir notre "identité narrative."'"<sup>217</sup>

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<sup>216</sup>See Balpe's *Labylogue* (2001), for example, a work inspired by Jorge Luis Borges' 'Library of Babel'.

<sup>217</sup>Serge Bouchardon, *Un jeu sur les frontières* (date unavailable)  
<[http://www.0m1.com/Theories/Un\\_jeu\\_sur\\_les\\_frontieres.doc](http://www.0m1.com/Theories/Un_jeu_sur_les_frontieres.doc)> [accessed 6 March 2018].

The *Livre des Morts* consists of a Prelude, followed by seven chapters, 'Étonnement,' 'Chute,' 'Animaux,' 'Désolation,' 'Reconstruction,' 'Abstraction,' and 'Renaissance.' The Prelude is introduced by a red title against a black background, which introduces a scrolling text in white. The text is followed by an animation which itself incorporates textual components. The animation at first consists of an abstract and fluid shape suspended on the screen in an evocation of flight or suspension. The soundtrack is an eerie and atonal bowing of some kind of stringed instrument. The next stage of the animation depicts several objects suspended and moving around the screen: a white clump of matter, a kind of flat and pixelated disk, an apparently plastic grey-white hardware box, and a skull, illuminated by patches of blue light.

Periodically, the irregular rotation of these images is punctuated by the rather apocalyptic sound of galloping hooves. The prelude ends with an enlarged image of the skull as the only remaining icon on the screen. The skull flickers and disappears to the sound of plucking strings, at which point the image and sound transform into a blurred cathedral accompanied by the sound of low vocal chanting of long and sustained notes. Clicking on the doorway of this cathedral, the image comes into focus, and a fire appears in the doorway. Clicking on the fire activates the sound of ringing bells, but their sound is bright and alert, rather than being particularly funereal, as the reader might expect.

Chapter 1 of the *Livre*, *Étonnement*, also begins with the chapter title in red, followed by blue-white italic poetry against a black background. Whereas the verses that introduce the Prelude appear as scrolling text, the verses that appear at the beginning of each chapter of the *Livre* are arranged in static lines. The poem evokes lists of names belonging to different cultures, arranged by first letter and, in the case of this early chapter, beginning with A, B, and C. The verse evokes a sense of anchorage in a certain place: 'A ceux qui sont déjà là, à ceux qui arrivent,' which contrasts with the disorientation and sense of dislocation of the verse in the prelude...indeed, the banal evocations, such as the narrator's concern about having left the gas switched on, imply an abrupt and somewhat tragicomic breakage between mortal and immortal realms, a passage from a familiar place into one in which the concerns of the former are drastically transformed.

The screen that follows consists of a grainy black and white image of a staggering, seemingly male figure. To the left of this centred component, there are

words that float and recede on the margin: included are the words ‘toujours,’ ‘fini’ and ‘jamais’. There is no syntactical structure governing these words, instead they appear in a kind of frenzied cycle that seems to try to attune the visual implantation of these words in the work to the kind of temporal concepts they suggest, the difficulty of which only stresses the incompatibility and the fraught quality of such terms in the context of the uncertain and atemporal world against which they flicker.

The soundtrack to the *Livre* consists of multiple voices, layered over each other, with volumes that are hushed, in some cases, and more dominant in others. That which is being spoken is incomprehensible, but the occasional trembling and anguished sounds therein render the ensemble a jarring experience of some kind of confused struggle. The image is gradually effaced by a colourful and angular geometric design, which, itself disappearing in turn, reveals a static, short poem, before confronting the reader with the first direct question. At this point, a text box appears, and the cluttered soundtrack comes to a halt. There is something comforting in the absence of this chaotic and adjacent noise, and certainly the silence associated with the question lends the process of introspection and reflective writing a kind of soothing and cathartic quality:

Souvenez-vous de votre dernière journée dans le monde des vivants.  
C’était hier...  
Quelles ont été vos dernières paroles ?

Chapter 2, *Chute*, follows the pattern of Chapter 1: a red title before static, italic, bluish text in verse against a black screen. The soundtrack is redolent of a sonar location device, which adds to the uncanny and immersive quality of the chapter. The reader must agitate the cursor against the screen to partially reveal, by displacement of black blocks, a text superimposed upon a cloudy, stormy and apparently fiery background: the orange presence is eventually revealed as the sun behind these clouded forms. The words that may be made out reveal questions, and the prevalence of the verb ‘voile’ reinforces the sense of mystery and cloaked dimensions that characterises this strange place.

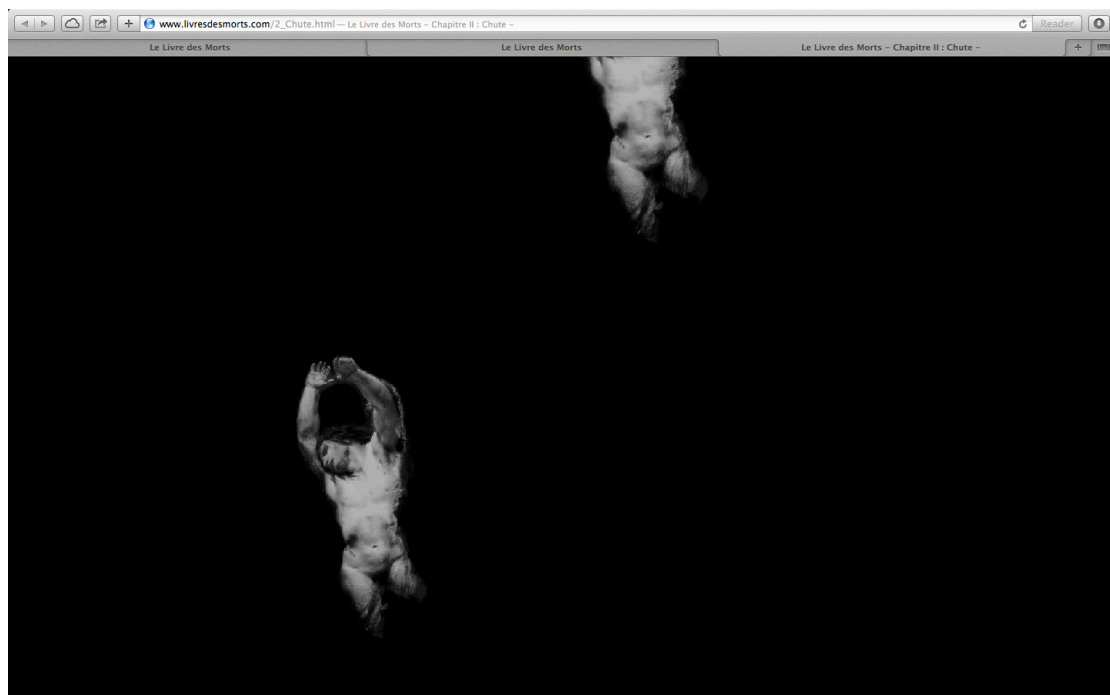
The glimpse of text that reads ‘Mes yeux? Mes mains? Mon sexe..’ also implies the task of interpretation enforced by this unfamiliar state of embodiment,



which no longer corresponds to the whole or identifiable body or its habitual bearings. The fragmented narrator is thus attempting to get to grips with a new and frightening experience beyond the familiar dimensions of personhood.

The questions and verbal fragments reveal fraught attempts at discovery and assimilation ‘Qui êtes-vous?’ ‘même façon’. Another section of the text reads ‘Jusqu’à l’effacement du je’. This screen remains for as long as is required for it to be investigated by the perseverant reader, until they have pieced together enough fragmentary detail to proceed. When they are ready, or indeed if they are simply giving up on the attempt to read the obscured text, the reader clicks on the screen to move to the next stage of the kinetic animation.

The next part of the animation consists of the representation of a falling body, initially appearing from the tips of raised hands, along a bowed head and torso to a point in the mid-thigh where it tapers into obscurity. The same, falling image is repeated at regular intervals, a repetition which removes the individuality from the event and instead places it within a rhythmic and universal structure. The stage that follows fragments the body, revealing only partial glimpses through square displacements on the screen, as was the case with the textual components that appeared earlier in the chapter.



Chapter 2: *Chute*. After the initial textual stage, the reader is faced with a series of identical, falling bodies. The nudity and classical appearance of these figures unlatches the text from any particular

temporality that might be identified through the presence of additional, time-specific, superficial features, such as items of clothing.

Following, then, from the initial multiplication of the body as a reductive intimation of the uniform and collective nature of universal experience, death and the loss of the body are portrayed as eclipsing the functioning of the body as an individual and self-contained signifier. The impression of fragmentation that follows this multiplication represents an initial step in the dematerialisation of the body whereby the distance from whole and familiar mortal forms begins to manifest itself. Unlike the interactive strategies deployed in *Séparation*, the *Livre des Morts* does not strive either to mirror the reader's body or call for bodily intervention from its reader that mirrors the narrative.

Instead, the physical element of the reader's experience of the *Livre* grounds them in the familiar position of the everyday computer user, processing information and completing short exercises, albeit ones which require some introspection and the awakening and evocation of sensory memories. The first interactive question to appear in the *Livre des Morts* addresses this curious, dual status of death – an experience at once solitary, alienating and particular and, at the same time, collective, inclusive and universal: 'Au cours des douze derniers mois, certains de vos proches ont-ils disparus? Enregistrez votre réponse.'

The third chapter, *Animaux*, begins with a short poem, followed by fragmented images of this classical body, with a faceless, cloaked figure looking over it. A huge spider descends from the top left hand corner of the screen. A growl sounds, corresponding with the appearance of a piece of text: '*Qui a peur de l'autre?*' As the cursor is brought to hover over the spider's body, a crowned skull appears, superimposed. The growl sounds again each time the skull is made to appear. Clicking on the skull/spider brings the image to move diagonally further down in the screen...the appearance of text continues: 'Ce qui nous rassemble.'

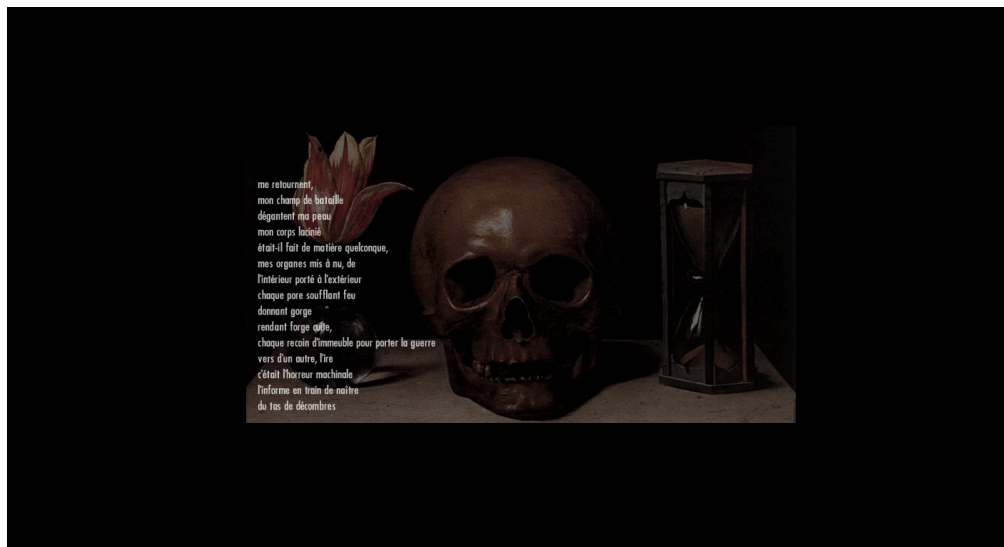
The fragmented body is glimpsed again through circular windows in the black screen. The audiovisual sequence ends on the question 'Quelles sont les grandes étapes de votre vie?' The reader is once again invited to record her response in the text box provided, personalising the overarching text through the addition of personal and reflective notation.

Chapter 4, *Désolation*, begins on a list of names, framed as a dedication. Its animated component has perhaps the most violent opening of all of the chapters, starting with a thunderous sound akin to the dropping of bombs and a desolate landscape with heavy red lettering hanging above it, flashing like lights, reading in capital letters 'JAMAIS PLUS'. The words 'NEVER MORE' appear alternately to the right and left of the background image, before disappearing on cue with the appearance of moving flames on a number of points in this apocalyptic landscape.

The fires are enlarged and the image morphs into a depiction of fiery cave-like structures against whose light the dark silhouettes of people may be discerned. Panels of falling green light begin to run from above the image and stream over its ashy ground. These neon green structures become gradually broader, appearing like screens of falling light, as the landscape behind disappears. This surreal sequence ends on a very classical, still-life type image, which depicts a skull, an egg timer and some flowers in a vase: all may be considered well-established symbols of passing time, mortality and the natural cycles of blossom and decay.

In this way, the text may be seen to polarise the reader's interpretative experience of its semiotic components, incorporating the most timeworn signifiers of mortality, such as the skull, alongside the most cryptic geometric interruptions, such as the streams of green light, in a combination of relative legibility and effective obscurantism.

Even these identifiable symbols, however, become subsumed in the wider experience of uncertainty and resistance to interpretation: their juxtaposition prompts the reader to interpret the status of symbols such as the skull as mere allusions to mortality, rather than elements which offer explanations thereof: in this sense, then, the established symbol is exposed as no more informative or penetrable than the abstract dimensions of the animation.



#### Chapter IV: *Désolation*

The poetry that forms part of the image above evokes a destroyed body, a ‘corps lacéré,’ whose pores breathe fire: a horrific evocation of bodily turmoil and deformation whose cause is not explicitly mentioned, but which allows the reader to assume this experience is that of violent death and destruction, which sees the intradiegetic body rewritten in terms of the ills that it has suffered.

The question that follows, addressed to the reader, returns the conceptual emphasis to the realm of familiarity, reinstalling the experience in the reader’s own body and their relative comfort. The question also denotes a kind of temporal distance, however, as it requires the reader to cast their mind back to the earliest days or months of life, and to delve into a kind of sensory memory that is rarely explored on a personal, introspective level: ‘Pouvez-vous décrire la première sensation éprouvée au cours de votre vie?’

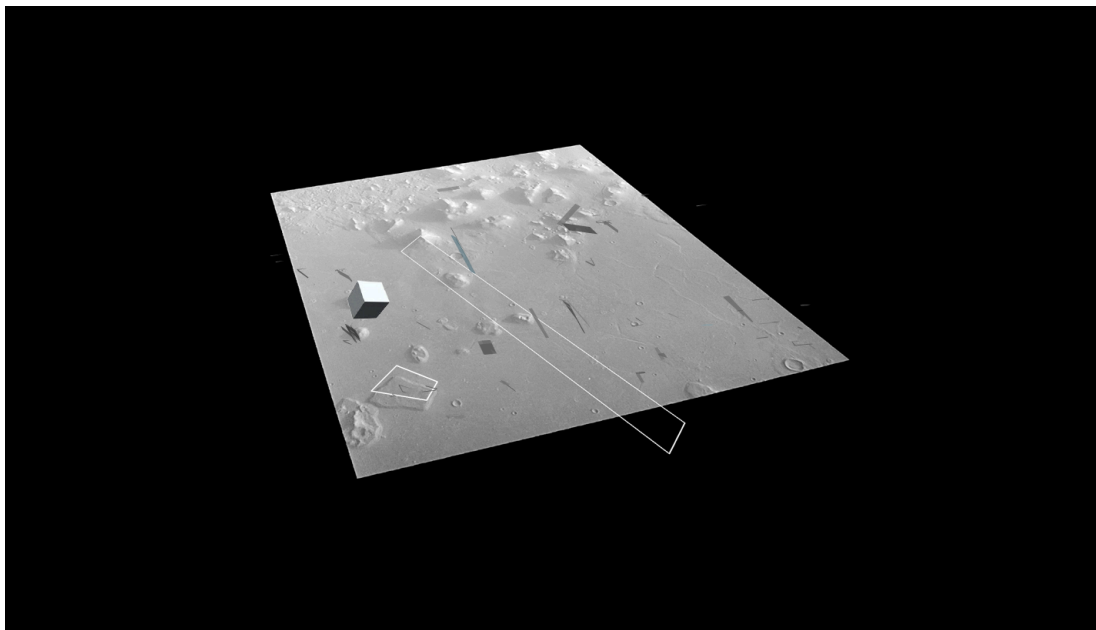
The fifth chapter of the *Livre, Reconstruction*, represents a kind of turning point in the text, as its focus moves away from the initial trauma of death and disembodiment and towards a kind of renewed sense of existence. As in the earlier chapters, the first text is a dedication, with names streaming across the screen in their alphabetical sets. The animation is accompanied by birdcalls and animal sounds, and the text is characterised by hope and renewal: the words ‘de nouveau,’ ‘espoir de voler,’ and ‘respirer’ appear in the text.

The animation depicts a colourful, abstract animal, a combination of forms from the animal kingdom, which seems to represent this overall reconstitution of

nature in this new scheme of existence. The animal form is overlaid with a snake, and the soundtrack incorporates the occasional howling of wolves, yet the tone is one that is fecund and vibrant. The small, red outline of a bird traverses the screen, within a kind of three-dimensional black box that frames the animation and its interlaced poetry lines in bright yellow.

The poetry that follows, accompanied only by this red bird, ponders the possibility of this regeneration ‘dites-moi mes ancêtres si je volerai de nouveau comme vous.’ Following the fearful tone of the earlier chapters, this chapter represents something of a reconciliation of the reader with the notion of a life beyond the mortal world. After these more promising representations of regeneration and new flight, the reader is asked to interact with this idea: ‘Croyez-vous en l’existence d’un au-delà? Enregistrez votre réponse.’

Chapter Six, *Abstraction*, is dedicated first of all to ‘errants’ and ‘éternels pérégrins’ and its animation is distinctly serene and geometrically sophisticated.



This animation is accompanied by sound elements, which only begin once the reader has clicked on the animation, but these are quiet and peaceful, redolent of babies’ babble and the hooting of owls. The screen shows the shapes captured above, gently hovering, casting their shadows on a terrain that appears powdery, snowy or lunar.

The base form gradually decomposes, leaving the lines and shapes suspended in the dark screen.

Agitating the movements of the cursor causes some further elements to appear – a purple and red sculptural shape and some illegible, white text. The poem that follows describes a surreal experience of reconstituted embodiment, whereby the narrator describes their triangular face and rectangular teeth. In order to comprehend this new form of existence, the narrator wonders ‘si je devais me transformer en idée, chiffre, concept, formule...’

The narrator searches, apparently in vain, for an abstract concept that would encapsulate the fluidity and airborne quality of the new physical and spatial sensations they experience; they search for a word from their previous existence that might satisfactorily describe what they have now become. The soundtrack turns into the splashing of water and a kind of regular thud, as if caused by water lapping against a wooden boat, knocking it against a pier.

An image appears of a small corner of a black and white tiled floor, which remains static, as the sound becomes the more active component in this section of the work. The reader must click on the screen to progress to the next stage, in which the text box appears and they are asked, in a sequence of related questions:

Avez-vous causé du tort à quelqu’un au cours de votre vie?  
Certaines personnes vous ont-elles nuí particulièrement ?  
Que diriez-vous si l’on vous annonçait qu’une possibilité de revenir vous était offerte ?

The questions thus revolve more around the notion of revisitation and renewal of agency, whereas earlier they bore a more retrospective and terminal character that offered no scope for integrating aspects of the former life, on which the reader is reflecting, into the new and strange life that is being posited by the work. This progressive optimism and envisioning of a new, outbound trajectory leads to the seventh and final chapter of the *Livre des Morts*, entitled *Renaissance*.

By contrast to all of the previous chapters, the background screen is a luminous white. The blue text reads ‘C’est ici que tout recommence...Car tout ce qui a été...sera de nouveau.’ The soundtrack consists of childish and insouciant humming and singing. The poetry that appears celebrates presence, but not that of humanity:

‘car je ne la connais plus’. Instead it is a connection to nature and texture that is the source of the narrator’s joy.

There appears what looks like a crystal ball, floating across the screen with a black and white tiled floor reflected inside, above which there is a bright blue sky and a white, sun-like presence. The sphere floats around the white screen amid the same reassuring and mellow sounds, which continue steadily. Clicking on the ball, the reader transforms it into a pink rose, which emerges and recedes from focus, moving across the screen at a similar, gentle pace to the previous animation.

As can be seen from this progression, then, the *Livre des Morts* represents something of a reconciliation of its reader with the initially traumatic and violent notion of death. It encourages an engaged approach to subjects such as the passage between worlds, physical and sensory surroundings and memory, in order to establish a kind of projected temporality and physicality, heavily metaphorised by the juxtaposition of ephemeral, symbolic and abstract forms.

Through the reader’s enlistment in the text’s constitution, they are invited to appropriate and personalise some of this experience of gradual transformation and rebirth by inscribing their own individual experiences, memories and reflections into the text’s general framework. In turn, the work itself, free of any substantial or unified protagonist, appropriates textual fragments in the form of contributions from each reader.

### **The body of the reader in relation to each text**

In the case of Annie Abrahams’ text, *Séparation*, it is ultimately and paradoxically the reader’s overzealous engagement with this alternate, digital orientation that serves to warn the reader of the neglect this entails for the physical body. The text thus presents a kind of seam between physical and digital modes of being, calling for a more fluent inhabitation of the two combined as a space that is only co-extensive insofar as being so serves the user.

The text thus does not, as might first be thought, encourage a renewal of and a return to the original state of embodied experience, free of digital interference, but rather highlights the interweaving of the digital and physical worlds as still far from smooth. In the case of Xavier Malbreil’s online text, *Livre des Morts*, the reader is encouraged to contemplate the phenomena of decay and resurrection; the text

attempts to project facets of such experiences via a form of consciousness ostensibly free of the known body.

The reader nonetheless engages with the images and text of the work notionally, rather than immersively. Indeed, the reader's role is akin to that of those who prepared the ancient Tibetan and Egyptian books of the dead, insofar as they contribute their own reflections and compose textual fragments to add to the work.

This interactive element, whereby the reader actively types into the empty text boxes of the work, blocks any kind of immersive alignment of the reader with the subjects of the *Livre des Morts*. Physical interventions of the readers of Abrahams' and Malbreil's texts thus entail the establishment of very different relationships between the physical and digital, intra- and extradiegetic worlds.

Having introduced the possibilities for comparison and confluence that are explored and questioned in the relationship between readerly physicality and digital immersion in each of these texts, the quality that I originally designated as 'immaterial' may now be considered in relation to Christiane Paul's concept of what she terms 'neomateriality,' which Paul defines as follows: 'Neomateriality describes the embeddedness of the digital in the objects, images and structures we encounter on a daily basis and the way we understand ourselves in relation to them.'<sup>218</sup>

Indeed, if each of the texts I discuss here strives to demonstrate a concern that is based on the exploration of a distinct mode of embodied being, which might be termed as 'immaterial' to some extent, insofar as it involves immersively, illusorily uprooting the reader from their immediate physical surroundings, the body of the reader is inevitably invoked – deliberately or otherwise - throughout this exploration. The idea of neomateriality thus effectively describes the overall relationship of mutual and inevitable human and digital embeddedness. It might be argued, then, that the texts I discuss here in fact produce concentric, rather than separate and distinct, phenomenological situations.

The concept of neomateriality is helpful, moreover, in conveying the coevalness of the physical and the hermeneutic experiences of reading interactive works, rather than treating the process as an exchange, divided between distinct sites. Conceiving of the reading of these works in terms of neomateriality allows for the

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<sup>218</sup>Christiane Paul, *From Immateriality to Neomateriality: Art and the Conditions of Digital Materiality* (date unavailable) <[http://isea2015.org/proceeding/submissions/ISEA2015\\_submission\\_154.pdf](http://isea2015.org/proceeding/submissions/ISEA2015_submission_154.pdf)> [page expired; last accessed 6 March 2018].



delineations between the body and the computing tools and the mind or imaginary and the text and its visual/aural components to be relaxed.

Such implicit divisions, however, are never, and cannot ever be fully dissolved, and are ones on which these texts, and *Séparation* in particular, nonetheless play. For this discussion, I have deliberately chosen texts whose approach to the deceptive dichotomy of embodiment and immaterial experience is established on the basis of apparently rather different concerns: in the case of Annie Abrahams' text, *Séparation*, the author addresses a practical, specific and medical question, whereas in Xavier Malbreil's *Livre des Morts*, the issues addressed by the text are more spiritual, universal and eschatological.

While Abrahams' text has a kind of remedial aim that reacts to and impinges upon the reader's physical behaviour in real time, the *Livre des Morts* constitutes a collective writing project and ever-expanding work in progress that encourages engagement with the notion of mortality through the reader's own recording of their personal experiences within the work itself.

These contributions by the reader are made in response to a number of questions that appear at the end of each chapter, in which readers are invited to record their responses to specific questions about their lives and prior sensory experiences.

In Chapter IV of the *Livre des Morts*, for example, entitled 'Désolation,' the reader is asked to describe the first sensation they remember having experienced over the course of their lives. In this sense, the *Livre des Morts* is very different from Annie Abrahams' text, *Séparation*, in that the latter deals for the most part with a select and precise aspect of immediate and sensible experience, though also taking into consideration the repercussions thereof. This example exhibits how the reader's sensory experience, though not as directly addressed as in *Séparation*, is nonetheless called for, to be inscribed upon the *Livre*.

The reader of the *Livre des Morts*, by contrast to the immediate and relatively unified temporal dimension of *Séparation*, is lead through a meditation on their past, present and future, as well as the kind of revisitation of sensorial memory that may be seen in the example above. Though, in this sense, the reflective scope of Malbreil's text appears to be broader than that of *Séparation*, and more akin to the nobler and more expansive concerns of classical literary works, and Abrahams' text seemingly represents a more limited, banal and quotidian concern, both texts ultimately engage

their readers in questions relating to embodied experience and the spatio-temporal echoes of quotidian existence, as well as the universal experiences of health and illness, and how these affect our contemplation of embodied, mortal existence and the possibility of the estranged materiality of an immortal space beyond the finite, physical world.

The article ‘Le Livre des Morts: processus de lecture versus processus d’écriture,’ was written as part of the presentation made to accompany a demonstration of the *Livre des Morts* at a conference that took place at the University of Barcelona on 16 April 2004.<sup>219</sup> The article is written by the creator of the *Livre*’s text components, Xavier Malbreil, and it gives a profound insight into some of the philosophical and spiritual influences that inspired the compilation of the *Livre des Morts*.

Drawing on the ideas of André Leroi-Gourhan, Malbreil proposes the following idea: “De même que l’outil est décrit par Leroi-Gourhan comme une prolongation de la main, le livre est une prolongation de l’esprit.”<sup>220</sup> To be sure, this differentiation between utility and spirituality, often taken for granted in the timeworn union of the two in sacred texts and manuscripts, takes on a renewed and further interest when related to considerations of technology-based textuality. Is it feasible for such spiritual dimensions to migrate along with the text from the solid and traditional encasement of the book and instil themselves within the more explicitly instrumental form of a computer monitor?

Is it perhaps the case that the codex, with its privileged associations with sacred texts, has been appointed an exceptional role among instrumental objects, hence benefiting from an exemption from such questions of spirituality versus utility, presenting the two as mutually complementary facets of a single item?

Indeed, if this were to be the case, the status of the text as a spiritual and expansive entity *per se* would have to be reconsidered in such a way that this exceptional quality might in turn be understood in relation to its potential infusion of the cold functionality of technological props, such as the screen and the mouse, in the instances in which these are used to generate spiritual messages and reflection, as is the case in Malbreil’s *Livre*.

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<sup>219</sup>Xavier Malbreil, *Le Livre des Morts: Processus de lecture versus processus d’écriture* (2004) <[http://www.livresdesmorts.com/lecture\\_vs\\_ecriture.html](http://www.livresdesmorts.com/lecture_vs_ecriture.html)> [accessed 17 June 2018].

<sup>220</sup>*Ibid.*

In this case, the computer should be enabled to benefit from the same, metonymic reverence as the paper codex holding a sacred text, provided the same kernel of spiritual textuality might be located therein. In a superficial and material sense, one might propose that the flickering, dynamic and expansive properties of electronic literatures, as well as the repeated use and reuse of the screen as a kind of illuminated palimpsest, might be favourably placed to freely convey (rather than deceptively encapsulate, as would be the case for a physical, print format) the transformative, elusive and mysterious themes of spirituality and antiquity than the tangible and limited physical structure of the print work.

It is interesting to consider how both texts, Abrahams' *Séparation* and Malbreil's *Le Livre des Morts*, necessitate or call for the guided addressing of physical or spiritual pain, drawing on their twofold, technological and narrative, authority to engage the reader: in the case of Abrahams' *Séparation*, it is a very literal kind of pain that must be attributed to its source, the immersive world in which the oblivious computer-user is engaged. In the case of Malbreil's text, it is a more abstract conception of bodily distress and transition that is, by approximation, perceived as a painful experience, when in fact it is more a question of physical rehabilitation and recovery.

The concept of 'remediation,' as it is defined by Jay David Bolter, and which I will discuss in the next section, refers to the passage of thematic and representative phenomena between successive depictions realised on increasingly advanced media, whose form is typically understood in terms of the instruments responsible for the transmission of this information or conceptual sequence.

Taking the body as a medium, or at least considering texts which encourage such an interpretation of the body, I shall consider the digital works I have been discussing thus far as texts that engage with a nuanced notion of remediation, whereby the term in the sense that Bolter assigns to it happens to overlap with the more traditional definition of remediation, as the rectification or adjustment of something that is inappropriate or defective.

In each of the texts in question, therefore, the dominant theme is that of remediation in both of these senses, bound up in questions of medium, physicality and the dependence thereon of sensory experience; the computerised text is created so as to provoke and facilitate a kind of mediation between first-hand and projected

experiences of physical awareness, with the ultimate goal of heightened awareness and reconciliation of direct embodied experience with an aspirational or inevitable version thereof. I shall hereafter explore how Bolter's definition might illuminate the nature and status of these texts as virtual remedies.

### **Remediation**

Jay David Bolter proposes the concept of 'remediation' to describe the new diffusion of a theme or concept by way of a medium that is arguably more advanced and typically more recently developed than the medium through which the original was presented. Bolter's definition is not limited to the mediatization and adaptation of artistic works, such as TV adaptations of classic novels, but this aspect of his study certainly covers some of the most observable instances of remediation as such.

It is frequently the case that the superseding medium presents its version as an improvement of the original message, either as a more complex and sophisticated rendering in terms of its construction and presentation, or a more accessible and apparently immediate version than its predecessor.<sup>221</sup>

These claims tend to converge upon the notion of audience engagement, which becomes a primordial goal of the remediated work: indeed, with the core notion of the original work often taken to be something pre-existing, the creative dimension of remediation tends to revolve not around the clarification or development of these original themes, but rather on the diffraction of these in accordance with the features and possibilities offered by the new medium.

Making somewhat atypical use of the definition of remediation, I consider Abrahams' *Séparation* as a text which parodies this idea of mediatized progress by showing the effects of a machine remediation and retrospective, enforced correction of human physical activity for whose deterioration it is, in fact, responsible. In this example, the attempted remediation performed by *Séparation* comes to represent not a valid and improved format replacement but rather a threatening and parasitic inhabitation by the computer programme of the role of the original medium: the human body.

In this sense, the notion of remediation, and the entirely positive spirit in which technology enthusiasts espouse it, is called into question in a manner that is

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<sup>221</sup>Bolter and Grusin, *Remediation*.

ludic and engaging, while also incorporating a serious topic for reflection: the human, behavioural and physical consequences of the unquestioning endorsement of ubiquitous mediatisation.

The fact that, in Abrahams' text, the computer maintains its dominant authority in the rectification of bodily ailments associated with its excessive use may seem contradictory, but is in fact entirely necessary, in light of this neomaterialist vision of human-computer relations whereby the embeddedness of digital structures demands a mode of connectivity that is ever more constant and enmeshed.

Within the context of this embeddedness, then, rather than the human user being forced to confront the problematic possibility of withdrawal from accessing these computerised dimensions of everyday functionality, Abrahams' text entertains the idea of a version of circumstances whereby the computer may be seen to incorporate dimensions that allow it to take into consideration its human collaborator, including the incorporation of digital sensors that detect potentially harmful human exertion, in an attempt to render these transactions between physical and digital worlds more mutually attentive and increase the equivalence between sides in this regard.

The notion of the computer responding to its human user in a way that is modelled on sensory capacities of a more human than mechanical type may be understood more clearly with reference to what James Bridle terms the 'New Aesthetic,' a grouping of phenomena that describe various manifestations of the "eruption of the digital into the physical."<sup>222</sup>

The 'New Aesthetic' involves several facets of the present, and hitherto most evolved, phase of digital embeddedness, including the sense that 'our devices are learning to see, to hear, to place themselves in the world.'<sup>223</sup> While it may be tempting to consider Abrahams' text in this way, such a reading would ultimately be rather hyperbolic and simply misguided.

*Séparation* must instead be understood as a text that remains a predominantly human imagining or fabrication of in way in which this phenomenon of machine perception might gain momentum. Indeed, the machine's 'observations' of readerly

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<sup>222</sup>Bruce Sterling, *An Essay on the New Aesthetic* (2012) <<http://www.wired.com/2012/04/an-essay-on-the-new-aesthetic/>> [accessed 20 July 2018].

<sup>223</sup>Author unknown, *The New Aesthetic: Seeing like Digital Devices* (2012) <[http://schedule.sxsw.com/2012/events/event\\_IAP11102](http://schedule.sxsw.com/2012/events/event_IAP11102)> [accessed 6 March 2018].

behaviour insofar as these arise in Abrahams' text are essentially composed of the prefabricated judgements and imperatives conceived and programmed by the human author. In this sense, *Séparation* touches upon and plays out some of the anxious dimensions associated with the human relationship to increasingly autonomous machines but, as Bruce Sterling's excellent critique of the New Aesthetic warns, a failure to attribute these capacities observed in various technologies to the human minds that developed and supplied them presents a great risk of "(retreating into) mystic obscurantism."<sup>224</sup>

Applying Bolter's notion of 'remediation' to the *Livre des Morts* opens up a broad scope of considerations whose interests are twofold: firstly, the question of the status of the digital, interactive text as a remediation of the traditional Egyptian or Tibetan book of the dead arises. Secondly, the idea of remediation comes into play upon analysing the *Livre des Morts* in a way that is less tangible or evident than these initial questions surrounding the media of transmission.

This arises from the work's implication of a necessity for a particular kind of embodied remediation, a renewal of consciousness in relation to physical and spatial dimensions of existence, that is required in order to reconcile the spiritual entity with its new state of being in the immaterial or humanless world with which the text indirectly confronts its reader, through an attempt at a gradual elision of the familiar. This is a question which may by its nature only be developed partially and speculatively, but it is perhaps a supreme example of an ongoing and yet non-evolutionary, limited and ever-speculative form of remediation, and one which relates to a temporality that is presumably oblivious to the endless advancements of technological progress.

Let us briefly address, then, this first consideration, that of the remediation of an ancient textual form. On the one hand, the creators of the *Livre des Morts* do not explicitly belittle the ancient model or reduce its status to that of a prototype; on the other hand, they are enthused by the possibilities of collective writing, interactivity and the evocative, audiovisual representations of distress, transformation and ephemerality made possible by the digital media that constitute the remediated work: and these possibilities, as I will shortly demonstrate, lead to a revisitation of the original texts that entails significant differences in the text's orientation.

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<sup>224</sup>Ibid.

Since the ancient books of the dead essentially constituted hieroglyphic collages and anthologies of various shorter texts, including prayers and spells, deriving from different sources and collected within a single work, the use of an electronic version for the reimagining of this practice is perhaps not most valuable for its accessible, remediated manifestation of the form but rather for its exhibition of these kinds of commonalities between ancient literary practices and the corresponding digital methods that are often erroneously seen to undermine or shatter traditional literary models.

Much of this dimension, however, remains underexploited – indeed, the linking of the animated symbols that appear in the *Livre* to the hieroglyphics of the original, Egyptian books of the dead would form a thought-provoking counter-argument to those who consider digital, animated symbols embedded in texts such as the *Livre* symptomatic of a recent and continuing denaturing of textuality. The elaboration of such arguments, however, is not Malbreil's concern: such discourse may be stimulated by its visual language, but the *Livre* is ultimately a narrative and meditative text, rather than a critical or theoretical one.

Despite Malbreil's interest in the original books of the dead, it should be taken into consideration that the new media version thereof allows for the superimposition of factors beyond the text's essential poetic components, such as the sounds of weeping and trembling voices, which link the work more explicitly to the destination and function of these writings.

Furthermore, this incorporation of these indicators of textual purpose and evocations of use as characteristic factors of the remediated text should be understood as constituting an expansion and consequent reorientation relative to the original texts' status: if the prayers and spells of the ancient books were to be read aloud by the bereaved, the digital *Livre des Morts* represents a relatively introverted exercise whereby the living reader internalises the adjacent presence of grief, evoked in the sounds that saturate the early chapters, hypothetically performing his own last rites as part of the speculative engagement and guided reflection offered by the interactive work.

This inflection thus represents a drastic shift in the nature and reading of the work. Characteristics proper to the original and paradigmatic texts that inspire Malbreil's *Livre*, such as multiple authorship and sources, and an open and a

potentially ever-expanding structure, are indeed smoothly incorporated by the digital text, but it should also be noted that, as I have argued, the digital remediation of the original model in this case also makes possible a radical reimagining of para-mortal autonomy, whose interactive nature the physical text would not have accommodated to similar effect.

It is, indeed, worth considering as an issue in itself the extent to which the possibilities of a particular medium distort the conception and operation of the work following its initial conception as an immediate artistic project. Whether this adaptation of the basic notion of the book of the dead represents an enhancement or a denaturing of the source text is thus a matter of perspective.

The use of all of the additional features offered by the new media may be seen as a display of greater loyalty to the media than to the messages or concepts being conveyed. It may be argued, once again, that this factor of readerly engagement is the major difference between the print and digital interpretations of such texts, in which case the process of remediation has served above all to allow a reinterpretation of the presentation of the text in light of the interactive and orientational possibilities offered by the new form.

The second consideration of remediation in relation to the *Livre des Morts* is that of the physical remediation entrusted to the reader as they imagine their own afterlife with reference to prior and projected physical and sensory experience. This consideration is certainly more complex, obscure and approximate than the migration between print and digital media I discuss above, in that the successive (bodily) medium has yet to be determined, and instead an approximate conceptualisation thereof must be configured by other means.

The text, as it progresses through its series of chapters, depicting reincarnation and rebirth, encourages the reader to reimagine a relatively formless or foreign mode of embodied being. It achieves this partly through the evocative use of aural components, which entail a kind of synesthetic reimagining of familiar physical experiences, such as groundedness and relational distance. In this way, digitally created experiences are endowed with a kind of prosthetic function, whereby their supplanting or extension of a familiar and limited form of embodied experience is a welcome aid in the exercise of understanding alternate modes of being. The text is thus a kind of vehicle that, by way of its possibilities for abstract representation,



allows for the projective and hypothetical remediation of the mortal body, exploring the expendability of the latter.

The reader's typed contributions to the *Livre* may be read as an attempt to record transferable and identifiable experience as disembodied information, which might later be rehabilitated within the transformed body that replaces its perishable and obsolete predecessor. Perhaps, then, reading Malbreil's *Livre des Morts* entails a simulated and immersive disembodiment akin to that which is offered by Abrahams' *Séparation*, but unlike the latter it does not explicitly or intradiegetically double back on its trajectory, returning to the human body that serves as a point of departure for the elaborations proposed by each text.

The *Livre des Morts*, rather, makes use of this experience of disembodied malleability in order to explore a kind of fragmented consciousness that bears little relation to the physical sources of the information supplied through embodied experience. *Séparation* may, as I suggested earlier, be considered a text that attempts to restore the mechanical dimensions of the human body through the authority of the digital extensions thereof. Abrahams' text remediates the physical risks to which its reader is exposed, in a dual instance of identifying media misuse and using its mediated authority to incite subsequent improvement.

*Séparation* is a text in which the neglect of the initial medium (the body) in favour of its successor is adopted as a theme that obscures the traditional focal point of human/computer interaction: namely the screen and the progressions brought about by typing and clicking, instead focusing on the human body as it finds itself implicated in these interactions.

*Séparation* is thus an example of 'remediation' in both senses, in the sense of rectification, as it cures a potentially damage-inducing set of bodily habits and also in the sense of Bolter's term, in that it recasts the required revisions of gesture and movement into a successive medium, whose perceived technological authority renders it the dominant side of the interaction, allowing it to orchestrate an exaggerated training session in neomaterial, human-machine coexistence.

## **Conclusion**

Whereas in *Le Livre des Morts*, the constructed experience of immateriality and alternate embodiment is presented as part of a palliative progression towards a

reincarnated life of renewed and unfamiliar vibrancy, *Séparation* apparently functions more as a cautionary tale that preaches care and moderation, without providing any outcome greater than the sustenance of a certain level of physical health and comfort.

In fact, it might be argued that this immediate and health-related concern presented in *Séparation*, rather than operating as the work's main theme, functions as more of a foil to the overarching argument of machine involvement in and impact on human, physical experience. Malbreil's *Livre des Morts* manages to employ the possibilities of digital literature in such a way as to draw upon and depict an evocative experience of transience and renewal made specifically possible by the immersive and audiovisual dimensions of dynamic media; Malbreil's text accordingly succeeds in transcending the confines of self-aware and circumscribed computer usage, and dialogues with loftier themes whose connotations may be understood as spiritual and literary.

Abrahams' text, *Séparation*, on the other hand, continues throughout to present as its supreme subject the computer on which it is displayed; it demonstrates some of the strengths of cybernetic literature, as observed by David Porush, taking advantage of its position to comment intratextually upon its circumscribing media.<sup>225</sup>

This commentary is nonetheless to be understood as trapped within the media of production and display, and the text becomes a work that is characterised by this very inescapability of, and dependency on, technological tools, deliberately denying any possibility for wider, thematic transcendence. From the juxtaposition of the two works arises the question of whether a remediation of human physical experience that is genuinely liberating or productive may be possible, whether it is a case of the pragmatic treatment of health issues or the deep and speculative inquiry that brings us into contact with the timeless questions of universal experience.

Arguably, the nuanced rendering of the mysteries of physical and spiritual experience achieved by Malbreil's text is no less powerful than that which is achieved by print literature addressing identical and related themes. Indeed, the computerised nature of Malbreil's text is but a further remediation (in Bolter's sense of the term) of literary works of this kind, which are themselves a text-based remediation of phenomenological human experiences, such as bereavement and fear of death.

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<sup>225</sup>David Porush, *The Soft Machine: Cybernetic Fiction* (New York; London: Methuen, 1985), p.21.

In this sense, Malbreil's text provides a worthy and compelling space within which contemplation of mortality and physical experience is achieved as validly as within a work of literature, albeit its relative textual impoverishment. The reader of Malbreil's text experiences a kind of transcendence of their immediate physical situation, which is achieved through the layering of evocative media, such as the sound and animation components, as well as the interactive dimensions that bring the reader back to various moments of their own personal and experiential temporality, redolent of a Bergsonian, subjective experience of time. In this way the reader's body is defamiliarised, as layers of buried sensory experience are unearthed in the physical memories to which the *Livre* directs its reader, at the same time as projected experiences are imagined.

The experience of reading *Séparation* is rather different in terms of these contemplative dimensions, and, indeed, if the *Livre des Morts* was conceived by its makers as an interactive remediation of the ancient Tibetan and Egyptian books of the dead, *Séparation* makes no bolder claim than to be a text which encourages its reader/user to experience a kind of computer-assisted check-up and health warning, and consider the implications of extended computer use on the body. This modest function, however, should not cause us to dismiss the literary potential of texts such as *Séparation* too promptly.

The interactive dimension of the *Livre des Morts*, whereby the reader may inscribe his own individual reflections upon the expansive textuality of the work, as well as allowing the reader to make his mark, represents a certain kind of empowerment of the reader, who, imagining his own death, is given the tools with which to transform his own grief into a kind of rebirth.<sup>226</sup>

Whereas the Egyptian books of the dead often contained spells destined to aid souls in finding their way to the afterlife, Malbreil's *Livre* suggests a demystification of this idea, instead proposing simple introspection, drawing on memory and lived experiences, as the catalyst for successful reincarnation.

These texts demonstrate the ease with which digital media allow for various aspects of print-based literary tradition and computerised, dynamic and interactive reading to be interwoven. As I have shown, however, the migration of concepts and

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<sup>226</sup>In the article cited earlier, the creators of the *Livre des Morts* cite Bernard Stiegler and the idea that, by inscribing themselves upon time, the reader-writers of the *Livre* were associating themselves with a particular date, thereby designating themselves as mortal beings.

themes between media rarely occurs without some kind of augmentation or transformation of their scope, catalysed by the possibilities of the new medium, and an accompanying, drastic reduction of the textual dimensions of these, which is practically inevitable.

I hope to have uncovered here some elements for further consideration, drawing together questions of both content and form, which should prove fruitful in formulating a response to texts such as the *Livres des Morts* and *Séparation*, both as mediatised phenomena, and as literatures.

## Chapter Five

### Literal Bodies: Gesture as Fuel and Feature in Readings of Digital Text

#### **Introduction**

The question of bodily implication in the endeavour of reading either print or digital texts is neither as simple nor as coherent as it might at first seem. The reader's embodied experience of a text being read, in the case of print literature, has been conceived by the theorist Garrett Stewart in terms of the 'buzz' of subvocalisations, namely the physical reverberations in the body which correspond to a kind of subconscious articulation of the text as it is visually perceived on the page.<sup>227</sup>

While Stewart's presentation of embodied readership in terms of this hum of subvocalisations may satisfy the need for a generally applicable model for considerations of physical engagement with print works, it is scarcely adequate in the analysis of the role of the body as it experiences works of digital literature. Indeed, a greater evocation of the synaesthetic nature of reading – and this as an originary quality thereof – helps to link these digital modes to a prior embodied understanding of the reading endeavour. In *The Spell of the Sensuous*, David Abram writes:

For reading, as soon as we attend to its sensorial texture, discloses itself as a profoundly synaesthetic encounter. Our eyes converge upon a visible mark, or series of marks, yet what they find there is a sequence not of images but of sounds, something heard; the visible letters, as we have said, trade our eyes for our ears, or rather, the eye and the ear are brought together at the surface of the root.<sup>228</sup>

Further to this aural/articulatory dimension, embedded in material that is apparently only visual, we might understand writing as the consequence and trace of a physical,

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<sup>227</sup>Garrett Stewart, *Reading Voices: Literature and the Phontext* (Berkeley: University of California Press, 1990).

<sup>228</sup>David Abram, *The Spell of the Sensuous: Perception and Language in a More-than-Human World* (New York: Pantheon, 1996), p.124.

manual gesture of inscription, and also as a form of notation often drawing on physical resemblances: not least in hieroglyphics, for example.

Though the subvocalized dimension may still present itself as one facet of the reader's engagement with the textual components of digital works, I argue that the broader physical scheme of computing equipment and the implications of the body of the reader thereby engendered must also be considered as an integral dimension of readership, whereas the more intuitive and habitual uses of the standard codex form render it a less remarkable or influential presence.

As the physical presence of the print book represents a minor consideration in the act of traditional readership, then, so too is awareness of the habitual practice of subvocalisations outshone by the further strange and compelling gestures of engagement required to properly experience the digital text. These gestures, of which I shall expose a number of examples in this chapter, mainly arise in digital textualities that require the reader either to physically manipulate the placement of the equipment displaying the text or their own position in relation to it, or else the letters themselves are moved by gestures that pass through tactile interactions with the computer keys and mouse.

I argue that these motions and manipulations, as they are constructed by the reader's response to the parameters of the work, may be read as representative of a renegotiation of literary spatiality and constitute new possibilities for the dimensional ordering of literary works which gain, through this choreographic and kinetic remediation of narrative or poetic material, further affiliations beyond the traditional scope of the literary that approximate the works in question to the plastic and performance arts.

While, then, the positioning and presence of the print work in relation to its reader is nonetheless a worthy consideration in addressing questions of embodiment in reading, in this chapter's discussion I shall limit myself to the exploration of a small number of digital texts, focusing on the particular ways in which these call upon the body, inciting dramatic physical interactions with, and responses to, these complex texts.

### **The physical components of digital texts**

Considering questions of embodiment and physical experience in relation to the reading of digital texts, the most evident starting point is a consideration of some texts which, by means of their content or operational nature, require physical involvement on the part of the reader in ways that might be seen as dissonant with or external to the behavioural patterns that characterise traditional readership.

These texts may be seen as physical manifestations or bodily echoes of what Astrid Ensslin, following Espen Aarseth's definition of ergodic literature as literature in which 'nontrivial effort is required to allow the reader to traverse the text,' terms 'heuristic ergodicity': a phenomenon demonstrated by texts 'that have to be "learned to be played/read meaningfully."<sup>229</sup> In the case of some of the texts I shall be discussing here, this tentatively meaningful and strategic, ludic mode of reading corresponds to the incorporation of particular gestures and tactile methods which draw the reader's bodily consciousness outward from the ordinarily ocularcentric sites of readership, and creates a reordered awareness of the continuous and coextensive nature of the interactions taking place between reader, device, and text.

Furthermore, the body, through its visible involvement in the work and the consequences thereof observed, is reinterpreted in terms of its integrality to the work's structure and message: this idea shall become clearer with the outlining of features presented by some of the texts I will discuss as examples.

It is necessary at this point, however, to signal that plenty of examples of digital literature exist through which the reader's embodied response is evoked in ways that are far more comparable to the experience of engagement with traditional, print texts. In these cases, the 'nontrivial' effort of interpretation and textual traversal remains a more purely conceptual enterprise, largely distinct from engagements of the reader's physical body. The reading of such works is therefore typically an ocularcentric endeavour, rather than one that engages parts of the body beyond the eyes, defining the tasks thereof as more elaborate than the visualisation and decipherment of text and imagery.

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<sup>229</sup>Espen Aarseth, *Cybertext*.

Astrid Ensslin, *Literary Gaming* (Cambridge, Mass.; London, England: The MIT Press, 2014), p.75.

Nonetheless, such visual and mental engagement may often arise as a route to contemplation of bodily themes, and so the physical enactment of gestures that relate to the text is not the only way of conceptualising bodily themes through digital literature, though it may certainly be one of the most engaging and interactive ways of doing so. In the previous chapter I explored in this regard Xavier Malbreil's *Livre des Morts*, a work whose synaesthetic and animated dimensions call for a contemplation of dispersed subjectivity and reincarnation in a similar way to that in which a comparable effect could be produced by way of verbal description in a printed literary work.<sup>230</sup>

In the case of Malbreil's text, then, embodied experience is contemplated within and in relation to the body of the reader at rest, rather than being hypothetically or mimetically enacted. The text also engages the reader in an exploration of embodied memory, at one point prompting them to contemplate and record in words the first memorable sensory experience of their lives.

In this way, the *Livre des Morts* generates a mode of readership that is rooted in embodied experience and draws upon embodied memory, but which endows this experience upon a static and contemplative body, rather than one that is engaged in gesticulatory interaction. As I have already suggested, it is necessary to clarify that the works I am describing in the discussion that follows have been selected specifically for the illustrative potential exhibited by their unusual requirements of physical intervention on the part of the reader, and so the flamboyant exigencies of these texts are by no means to be taken as representative of the demands and characteristics of digital literature more generally.

It is typically the case that texts falling within the genre of hypertext, for instance, remain more closely linked to the reading modes associated with print works, without calling on the body beyond the minimum conditions for traditional reading. It is no coincidence that such works tend to be much more text-heavy and order their narrative components in a textual and arborescent way, compared to the works on which I shall be focussing in this chapter. Serge Bouchardon, however, similar to Malbreil insofar as both may be defined as practitioners of digital literature in the French context, and whose works I shall be discussing later in this chapter, has

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<sup>230</sup> Xavier Malbreil, *Livre des Morts* (2004) <<http://www.livresdesmorts.com/>> [accessed 6 March 2018].



argued that textual forms incorporating physical manipulations of the work by the reader represent one of the major currents in contemporary French electronic works.<sup>231</sup>

These works, furthermore, represent promising avenues through which to understand the greater detachment of French works from the print literary culture, a separation which is not as pronounced in the American context, for instance, in which hypertext is considered one of the most prominent genres and forms.<sup>232</sup>

These examples nonetheless represent exciting advances in the technologies that enable particular types of alignment of the reader's gestures with the display and formation of animated text, representing valuable indications of how a forthcoming embodied and responsive literary experience might operate.

### **Textual embodiment and tactility**

I shall therefore in this chapter be primarily considering the linking of gesture with textuality, and the imperative for embodied readership in the cases of two broad types of instances of this sort of engagement. First, I shall consider physical immersion and implication of the reader in literary texts that are conceived for specific environments such as projection spaces, installations and visualisation areas. Each of these explorations shall inform the analyses I undertake in the final chapter of this thesis, which examine the scope for poetic inscription on spatial experience, insofar as this might be achieved by entwining literary and narrative texts with the technological devices of everyday experience.

Secondly, I shall explore readerly interactivity in the context of *lecture privée*, as opposed to in gallery or installation spaces, in terms of physical enactments corresponding to readings of particular texts which I see as endowing further nuances or else renovating entirely for literary purposes what I will loosely term the 'equipment' of digital readership, ie. the hardware involved in storing and displaying the work, and the parts that allow the reader to influence the display and constitution thereof, notably the mouse or trackpad and keyboard.

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<sup>231</sup>This literature, which emphasizes multimedia animation and interactive manipulations by the reader, constitutes at present a major trend in digital literature in France, but also in Québec. This trend concerns the works intended for "private reading" ("*lecture privée*"), in particular for the Web.' Bouchardon, *Digital Literature in France*.

<sup>232</sup>Philippe Bootz, 'The Functional Point of View: New Artistic Forms for Programmed Literary Works,' *Leonardo*, 32.4 (1999), 307-16.

I consider such texts as necessitating a kind of gestural scheme or choreography that tends to run parallel to the act of reading, but might also be seen to intersect therewith, intervening and inflecting the flow of readership in a more influential way, forming mobile and typically ephemeral bridges between reader and work that entail the mutual conditioning of experiences of interpretation on both the physical and textual levels, in some cases fusing into a single process of perception.

Although the concerns adopted in relation to the examples discussed in each of these chapters shall be closely related, the works to be presented in the next chapter represent a further dimension of embeddedness to that of the texts I shall be examining here, insofar as these are mingled with other mobile applications, with email inboxes and with the more practical and pedestrian forms of ‘notification’ that fleck the reader’s multitasking devices. In other words, whereas the works considered here, whether consulted at home on devices or in public in a gallery or similar space, the texts still bear the distinctness of the Work in their externality to the reader’s own coextensive biological/technological landscape of experience and communication. The literary examples discussed in the next chapter are thus more akin to Text, in the Barthesian sense, insofar as they jostle spatially and structurally with other forms of notation and correspondence.

The first kind of readership situation, by virtue notably of its being a shared experience, is more difficult to summarise in terms of unifying features, and involves a less directly tactile and more immersive, embodied experience of textuality. Such works include exhibitable text installations created to be experienced by a number of reader-viewers at a time. Drawing on two examples from French creators in this chapter, I shall return to these immersive text installations, Balpe and Benayoun’s *Labylogue* (2000), and Balpe et al’s *MetaPolis* (2002) shortly.

The two examples of the second type of text that I shall discuss here, texts whose reading involves direct, tactile intervention from an individual reader, are the online texts *Déprise* (2010) and *Toucher* (2012) created by Serge Bouchardon, each of which is hosted on a website specifically created for the work. The first of these works, *Déprise*, is the first part of a trilogy entitled *Hypertensions*.<sup>233</sup>

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<sup>233</sup>All three of the texts may be read on Bouchardon’s website: Serge Bouchardon, *Digital literature/Littérature numérique* (2017) <[www.sergebouchardon.com](http://www.sergebouchardon.com)> [accessed 6 March 2018].

Though alike, in terms of relating textuality and the body of the reader, there are notable differences in the way these works operate: the juxtapositions I shall create in this chapter shall thus allow for the way in which these text/body relationships are established to be explored in greater detail. In the case of exhibited text installations, there are issues of accessibility and ephemerality that naturally do not affect online text. The online work may, of course, be displaced from its URL, and as such its address should not be stressed as one that is fixed and permanent. Furthermore, often distinct from the exhibited work, whose term on display is limited, the work hosted on a website is offered much more scope to evolve over time, as more contributors have a chance to access and participate in its elaboration.

While the openness of the online work to worldwide and accessible participatory expansion, this does little to raise its value in terms of worklike distinction: in this regard, the relative obscurity of the exhibited text or gallery installation can be seen as paradoxically enriched by its enclosure and obscurity in this sense. The exposure given to works such as *MetaPolis* through exhibiting these lends such installations a mark of distinction, implied by the curatorial decision to place them on display, but also the conditions of exhibition and rules governing entry and participation maintain a protective barrier for the work and its manifestation. This engenders a particular kind of authority and attention that would not otherwise be experienced by one interactive website among masses of others: one might argue that visitors to a website are not themselves on display in the way that exhibition visitors are the subjects of a quiet, implicit set of controls.

Indeed, other than ‘pointing’ readers towards particular sites from reviews or other forms of online discussion, a mark of distinction comparable to selecting a work for exhibition is scarcely achievable in relation to an online work hosted on an interactive site. The imagined ubiquity and accessibility of the digital work versus the closed and elitist structures that guard print texts can then be clearly not so easily applied, with the actual mixture and scale of the physical components of the work in question determining such matters to a greater degree.

Gesture is used in a particular way in the *MetaPolis* installation: though distanced from the display screen, the visitor to the exhibition may nonetheless see the text rotate in accordance with the rotations of the reader’s own hand. I shall return to this

gestural interaction later, comparing this to the more tactile way in which gesture is employed in Bouchardon's texts.

In each of these two types of physical experience of literary works – the more direct, tactile form of physical interaction, and the more immersed form, whereby text becomes a constituting element of the reader's spatial and physical environment - the equipment employed is reconceptualised and endowed with specifically literary features and aims, as the result of a specific elaboration of the experience of interactive readership deliberately conceived by the creators of these works.<sup>234</sup>

In addition to such provisions made by the creators of these texts, the reader must also actively intervene and engage with the emergence and display of text in a distinctly physical way, involving much of the body in the reading endeavour and understanding the move away from ocularcentric readership precisely by enacting and experimenting with these alternative modes.

### **Gesture and Immersion: Installations and site-specific textuality**

As I mentioned in my introduction, the first rough category of embodied reading and textual gesture I shall now briefly explore has to do with two installations by Jean Pierre Balpe and collaborators, *Labylogue* (2000) and *MetaPolis* (2002). Both works differ from the texts by Bouchardon that I shall turn to shortly, insofar as they are created for public exhibition, rather than private reading, and thus are typically experienced and conceived for a congregated public of readers rather than a computer-facing individual.

These differences imply significant changes in the creation of such works and the experience of reading and interacting with these. Not least, the characteristic and consideration of site-specificity is one that reminds us that digital literatures are not necessarily always more accessible and easily communicable forms than their print counterparts, and indeed the literatures developed as installations for reading on a particular piece of equipment or in a particular, immersive environment remain consultable only to those suitably positioned to visit these and acquaint themselves with their particular features.

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<sup>234</sup>Such features include those intradiegetic elements that correspond to the use of a 'mouseover,' whereby the reader brushes the laptop touchpad with her fingertips, often corresponding to the uncovering of some obscured text on the screen, or other, related gestures and belong to a kind of tactile repertoire that has been developed by digital artists and writers.

The first of these, Jean Pierre Balpe and Maurice Benayoun's *Labylogue*, was first exhibited publicly in 2000. The work was presented as part of the exhibition 'Tu parles !? Le français dans tous ses états,' which took place across three main locations, entailing four themes or 'espaces de découverte des langues françaises'.<sup>235</sup>

The work was exhibited simultaneously in Brussels, Dakar, Québec and Lyon. Its creators describe the work as an 'espace de conversation,' 'à mi-chemin entre le livre et la Bibliothèque de Borges.'<sup>236</sup> Both the Borgesian reference and the probing of interactive possibility hark back to 1985 exhibition *Les Immatériaux*, which I discuss in chapter three. *Labylogue*, however, benefits from much more evolved possibilities for connectivity and participation than the symbolic Minitel interventions that were exhibited in 1985. An Internet connection linked the manifestations of the *Labylogue* installation in the different locations in which it was exhibited, thus implying a 'labyrinthe virtuel' beyond the visible exhibition space, which visitors to each location were also invited to explore. In pairs, visitors were encouraged to 'converse' in French.

The walls of the work were thus inscribed with phrases interactively generated in real time, representing the exchanges between visitors. The text that appears prompts oral discussion that echoes around the physical space of the exhibition. The installation sought to investigate the layers of interpretation that mediated communication establishes between two persons in dialogue, bestowing a particular power and importance upon the *trace*. While, then, *Labylogue* takes its visual cues from the interactions of its participants, texts such as *Déprise*, on the other hand, demonstrate how the text may implicate its reader by prescribing gestures that reflect and power its unfolding. I shall return to this text shortly.

*MetaPolis*, also the work of Jean Pierre Balpe, along with Miguel Chevalier and Jacopo Baboni-Schilingi, was a virtual reality installation that covered an area of 300 square metres, exhibited at roughly the same time as *Labylogue*.<sup>237</sup> A trilingual, interactive text generation installation, *MetaPolis* was first shown in Monterrey, Mexico in 2002.<sup>238</sup> Composed of 3D images of Monterrey, the Mexican city in which the work was first exhibited, of generated music specially created to mirror spatial

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<sup>235</sup>Ibid.

<sup>236</sup>Ibid.

<sup>237</sup>Jean-Pierre Balpe et al, *Principes de MetaPolis* (2002)

<<http://www.ciren.org/ciren/productions/metapolis/>> [accessed 30 May 2018].

<sup>238</sup>Jean-Pierre Balpe, *MetaPolis* (2015) <<http://www.balpe.name/Metapolis>> [accessed 6 March 2018].

aspects of the city and its particular ‘univers sonore,’ as well as generative texts, described as ‘multiculturels’ and based on a similar concept of modelling the work on various aspects of its surroundings.

In so doing, the work aims to expose a generic urban principle common to all of the large cities of the world. The work evolves thus so as to adopt as content aspects of each city in which it is exhibited, striving towards a metaphor of a “ville des villes.” The scope of the work thus takes in image, sound and text, underscoring the flux, mobility of ideas and constant interchange of the city.

The installation consisted of 3 slightly curved screens, allowing visitors to see the projections from inside and, on the entry screen, from outside. The installation interior is an interactive space in which visitors’ actions bring about events via three red, blue and green cylindrical interfaces. The green cylindrical interface corresponded to the elements of the installation used by Balpe to deploy generated text Balpe’s writing generators, the red interfaces to Miguel Chevalier’s visual creations and the blue to Jacopo Baboni-Schilingi’s music.<sup>239</sup> Light-sensitive sensors situated on top of each of the three cylindrical interfaces, allowing the public to interact with the work.

These nine sensors were at the same time linked to four computers and three multimedia projectors: three sensors were dedicated to written elements, three to images and three to music. The textual components of *MetaPolis* are displayed as overlaying the cyberarchitecture of Chevalier’s images and they are generated in real time in English, French and Spanish, at times simultaneously.

The interventions of the reader/visitors influence the choice of language and the spatialization of the texts. The world of the text becomes at once a reflection of the city in which it is being exhibited and a kind of ‘contre-point onirique,’ interwoven with historical and mythological elements. Meanwhile, the sounds generated by the installation include those of voices in a church and the sound of steps on asphalt. Whereas within the interior part of the installation the visitor is an active participant in the work, on the exterior side they are a spectator whose physical contribution to the work is not required.

In the case of installation works, the expanded ‘space’ of the text means that it may accommodate more than one person at a time without losing the sense of

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<sup>239</sup>These ‘generators,’ it ought to be explained, were not specific devices, but rather materialised in the form of the computing equipment present that was set up for the diffusion of generated texts.

immersion in the work, so that several people may experience, interact with, and interactively influence the material on display simultaneously. Certainly, then, this immersion is of a very different type to that experienced when reading screen-facing works such as those by Bouchardon, to which I shall shortly turn.

As the reader is enveloped in the text and often engaging with text as a floating entity, detached from any conventional computing equipment, the reader's physical experience of the digital text is not so much an immediate or haptic one, as in Bouchardon's texts, but more an experience in which the embodied position of the reader relative to the text as a three-dimensional entity with a corporeal nature of its own is being explored.

The reader of digital texts, who would usually be seated at a desk, is in this case standing, adopting a position that connotes a more free and active approach to the work. The occasional tools used to interact with these texts lend the enterprise of reading its own adapted physical extensions and choreography, allowing for the incorporation of mediatory and interpretative gestures as part of the act of reading.

### **Haptic reinscription – Bouchardon's *Déprise* and *Toucher***

To return to the second of the two types of text I briefly mentioned in my introduction, I shall next explore some examples of digital texts that involve the reader in physical gestures which neither belong to the traditional enterprise of readership, nor to the usual manoeuvres of everyday and professional computer usage.

Unlike in the case of exhibited installation works such as *Labylogue* and *MetaPolis*, whose gesticulatory demands are more broad and spatial, involving in the case of *MetaPolis* a physical prop that is placed to be manoeuvred between the reader and the computer, these gestures are typically applied directly to the surfaces of the computing equipment – most frequently the keyboard and the mouse or touchpad – and so the reader's gestures are of a more haptic nature, and are ultimately more practical than choreographic in appearance.

The kinship of these gestures with those of standard computer use is thus tighter than those employed in reading the texts on display in *Labylogue* and *MetaPolis*: the gestures and the use made thereof lend nuance to and subtly reinscribe the pre-established modes and gestures of human-computer interaction, rather than pulling away from these and invoking the expressive potential of the intervening

spatiality. Through these nonstandard experiences of touch, which come to overlay the more standard and intuitive operations of computer use, the reader's attention is nonetheless drawn to the role of their bodily, and particularly manual, interventions which form part of the reading enterprise and forcibly resist the tendency towards a passive, ocularcentric reading.<sup>240</sup>

The embodied acts of readership thus remain in close proximity to the materials of transmission, without surpassing the physical limits of these, yet the attempt at appropriating the computing equipment for the purposes of tactile readership is riddled with glitches and ambiguities.<sup>241</sup> While the extension of bodily experience to include the hardware that produces the text bears a kind of prosthetic quality, then, the operation of this system is variably intuitive, a fluctuation that is in some cases mobilised in order to mirror experiences represented within the digital text itself: such is the case, I will argue, in Bouchardon's *Déprise* (2010).<sup>242</sup>

The experience of reading should, to some extent, in light of the tactile quality of the interaction, be felt as a more immediate one than the purely ocularcentric experience of a text, in the sense that the direct application of the reader's touch is required. The text can, in addition, be seen to engender these forms of physical activity in order to rewrite certain conventions of computer usage and encapsulate these within the extended literary and proprioceptive experience that results.

In this way, the texts may be seen as inventing and, indeed, requiring more creative and self-consciously tactile gestures for their specific readings, compared to the usually more straightforward experience of reading an average onscreen text. However, as I shall demonstrate, this invitation to the reader to physically intervene is not always a productive or rewarding one, insofar as the results anticipated by the reader's touch are not always achieved, and the gesture of the reader often appears to have been disregarded or misinterpreted by the text.

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<sup>240</sup>I distinguish here between passive ocularcentrism, whereby bodily themes might still be contemplated, as in the case of Malbreil's text 'Le Livre des Morts,' and the more manifestly engaged or active ocularcentrism promoted by texts such as Bouchardon's, in which the eye links up the cycle of effect from the onscreen prompt, to the physical intervention to its result as observed on screen, and so on.

<sup>241</sup>For a discussion that testifies to this embrace of malfunction in digital texts – bugs and frustration of the reader – see Philippe Bootz, "La lecture d'un texte sur ordinateur se distingue en effet très nettement de toute autre lecture par cette expérience du "bug" que le lecteur possède. Tout écart à la norme pourra être ressenti comme un problème technique." Philippe Bootz, *Ai-je lu ce texte ?* (1996) <<http://www.serandour.com/archives/2000-04-27/carnet/bootz0996.htm>> [accessed 6 March 2018].

<sup>242</sup>*Ibid.*



What is important to note is that these dysfunctional elements are deliberate operational and textual features, and should be taken into account as intentional aspects of the text's creation and the experience that its maker strives to engender. Arguably, the obstacles that arise, which frustrate some of the reader's gestures, and the deviations of the text that resist the reader's attempts at control, as well as engaging with the limits of linear reading or those of readership on the level of purely textual hermeneutics, also operate on the level of conditioning and sharpening the physical awareness to which I referred earlier – at one point in Bouchardon's *Déprise*, for example, the disorientated reader's attention is drawn back to the keys they are pressing, as a text appears, apparently as a result of their interactions, but of which they are not the author.

These dissonances further emphasise the extent to which the goal of these works is not the smooth traversal of ephemeral interruptions to the reading, proceeding to an orderly and singular text, but rather the dedicated incorporation within the act of reading of a sustained, embodied mode of readership that bears witness to both the navigability and the rebellion of kinetic textuality, doubling the sites of reading and raising questions about the location of the text as source and act, taking the variation of these qualities as a constituent of the text's content and meaning.<sup>243</sup>

It should be taken into consideration that the favourable inclusion of glitches and difficulties in digital texts corresponds to a particularly French conception of digital literature, encompassing the so-called 'esthétique de la frustration,' which I have mentioned previously, also involving a welcoming approach to viruses and other factors that interrupt the attempt at progressive and continuous reading.<sup>244</sup>

### **Touch and tactile reading**

Perhaps the most frequently arising example of diversification of the gestures of computer usage in readings of digital texts occurs in the ways in which readers of several digital texts are required to adapt their usage of the mouse or touchpad based

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<sup>243</sup>This also works in line with the idea of a text as a continuous process by which meaning is produced, rather than a static, signifying entity.

<sup>244</sup>Camille Paloque-Bergès, *Poétique des codes*, p.39.

See also Philippe Bootz's article, 'The Unsatisfied Reading,' in *Regards Croisés: Perspectives on Digital Literature* (Morgantown: West Virginia University Press, 2010), pp.11-25.

on the ways in which an animated text presents itself, stalling at times to prompt the reader to probe the text with these manual tactics.

Bouchardon's *Déprise* makes use of the touchpad in this way. As the text begins, the reader must run the cursor over each phrase, such that the letters shuffle within their line and reassemble to form the emerging phrase.<sup>245</sup> It is only once the cursor is placed upon the 'surface' of the letters that these may become rearranged and legible, and so the moving text is endowed with a kind of artificial sensitivity to the reader's touch, which is mediated by the cursor. The reader is from the outset aware of the text as a 'champ méthodologique,' and far more so than in the case of the collective installation experience, whereby the viewer is detached from these methods, there is an imperative to learn to operate within the requirements of this field if the reader is to experience the work at all.<sup>246</sup>

The reader subsequently clicks to display the following phrase, behind which the trail of their cursor apparently produces a series of blotches of luminous blue. The background is invaded by streaks of luminous colour as the letters continue moving in response to the cursor's action. These colourful interventions, at first perceived as the result of the reader's actions, turn out to be pre-recorded dimensions of the animation itself. The reader's task is thus revealed to be a twofold effort consisting, on the one hand, of attempted readership of the kinetic text and, on the other, of these tentative experimentations with her ability to inflect upon the display and configuration of the text through movements of the cursor or combinations of keys.

The reader is next encouraged to press 1, 2, or 3, depending on the time at which she wants to schedule the 'rendez-vous' that will take her to the next chapter, in which the narrator encounters a woman amidst the crowds whose presence further scrambles his ability to formulate questions. A question mark appears at the top of the screen, on which the reader clicks. Brushing her finger(s) across the touchpad, the rows of coloured questions that appear to the right hand side of the screen become more densely packed, gradually revealing in the accumulation of coloured nuances of their letters the face of the woman described. In this way, the kinetic work may be seen as playing on the apparent distinctions and divisions between reading text and

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<sup>245</sup>This gesture is what is referred to as a 'mouseover,' a definition not limited to e-literature but also used in computing more generally.

<sup>246</sup>*Ibid*, p.70.

image. The reader must continue to brush the screen with the cursor by applying the appropriate pressure and movement to the touchpad, until the image appears in full.

This rubbing gesture, usually denoting erasure or effacement, becomes the opposite in this work, as well as in the cases of other digital texts: instead of effacing, it rather reveals parts of the text that have been deliberately obscured by the writer precisely to endow them with this ceremonial, required layer of palimpsestual unveiling. Simultaneously brushing the touchpad, screen and cursor in an attempt to excavate obscured or incomplete components of a digital work becomes, through progressive contact with texts that include this kind of feature, a strategy and a reflex for the reader, by which they might interactively reveal further dimensions of the text or overall animation.

Whereas in the case of Bouchardon's *Déprise*, this gesture operates as an interactive tool largely removed from any intradiegetic connotations of the rubbing action required, there are other texts, such as one anonymous work (v2) which may be found at the website 'anonymes.net,' whose first chapter makes use of this gesture such that instances of touch from the 'external' world of readership are echoed within the text.<sup>247</sup>

The woman pictured in the animation is seated in front of a mirror. As the reader brushes the cursor along the letters of the text to the right hand side of her image, these turn from black to white in accordance with the reader's tactile trail, but also the rubbing of the reader's finger on the touchpad causes the animated woman depicted to rub her face with the palm of her hand, in a gesture so quick it is difficult to capture as a screen shot.

The quick flash of movement leads the reader to question the scope of their physical influence on the animation. Indeed, though the movement of the woman's hand does not follow a similar path to that of the reader's finger, or change with differences in their tactile use of the touchpad, the intersection of roughly corresponding gestures, which also impinge upon the colour and forms observed in the text, represent promising possibilities for evocative and haptic reading.

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<sup>247</sup>Bouchardon also analyses the other texts on the 'anonymes' site in 'Figures of Gestural Manipulation in Digital Fictions,' in *Analysing Digital Fiction* ed. by Alice Bell, Astrid Ensslin and Hans Kristian Rustad (London: Routledge, 2016), p.159.



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[www.anonymes.net/v2/chapitre1.htm](http://www.anonymes.net/v2/chapitre1.htm)

Returning to *Déprise*, it might be argued that the work does not engage in any clear mirroring of gesture and intradiegesis in this way, precisely as the aim of the text is to undermine the reader's ease of relation to the text. Any recognition of themselves through the gestures they perform on the device and those observed as consequences thereof within the text are deliberately mediated, garbled, or based on a distinction between the world of operation of the text and the familiar physical environment of the reader.

The soundtrack to *Déprise* is one of vacuous, mechanical verbalisations as the narrator describes the end of his relationship. The phrases 'Je sais que pour toi ça doit être un choc,' and 'J'ai que de l'amour pour toi' hang together flimsily, shaken by the movement of the cursor as if swaying in the wind. The phrases multiply and appear as panels formed from lines of text, which extend outwards in each direction from a central point on the screen.

The next chapter of *Déprise* consists of a composition written by the narrator's son for a school assignment on the subject of heroism. The subject of the text, which speaks of the ephemeral nature of actions, resonates with the grief and transience that we may assume are being experienced by the narrator. The text is represented on screen, gradually constituted by loose letters, which drift into place. When the reader clicks on the text, however, the careful composition comes apart, with tangential phrases forming and sounding aloud, which represent the spiralling thoughts of the

narrator as he forms the phrases of his own thoughts, independently of any attention he is supposed to be paying to his son's assignment 'Je – ne – t'aime – pas.'

The phrase appears momentarily, displacing the letters that surround it, before sinking back into the reconstituted order of the assignment text, mirroring the narrator's attentions as he tunes in and out of the task. The reader encounters a surprise towards the end of the text, whereby they are involuntarily aligned with the narrator. The webcam captures an image of the reader, which is clearly visible when the cursor is untouched, but once it is passed over the image of the reader it becomes blurred, as if reflected in some kind of swirl of reflective, metallic gel.

This feature and the texture applied correspond to the tone of the textual components, in which the narrator describes losing any sense of his own reflection or image. 'Il est temps de reprendre le contrôle.' The inclusion of the reader in the screen, with the narrative appearing below their image, is jarring in the sense that it is an interactive intervention that they did nothing to prompt.

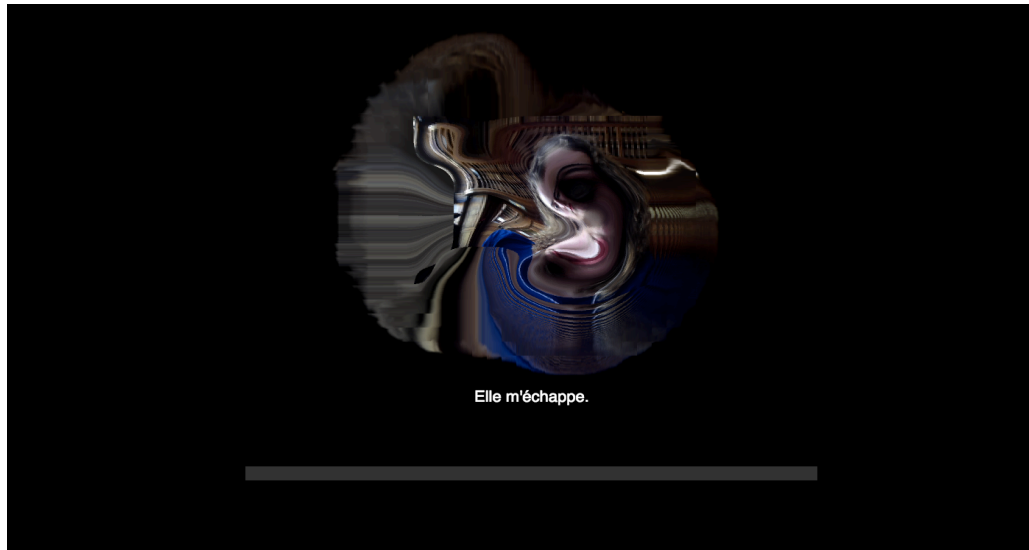
In this case, it is the machine that appears to be taking an interactive step, but in an uncanny and unanticipated direction, drawing the reader into a kind of involuntary interactivity: indeed, it is as if the text itself (provided the webcam has been granted permission) suddenly 'looks' back at the reader.<sup>248</sup>

This kind of dimension – and indeed, such play with dimensionality – is essential to the elaboration of a digital literature that, on the one hand, reassures and incentivises the reader by supplying them with compelling and navigable content to be discovered, provided they traverse the text in the particular ways that the text invites, but also destabilises this readerly complacency and sense of mastery by unveiling possibilities whose counterparts in print literature are not as dramatic or, indeed, are impossible.

Through a combination of cumulative familiarity that may be attained based on the processes of conventional reading and the introduction of expressive and representative modes as yet unaccounted for in literary criticism, the undertaking of a rich exploration of the possibilities of digitally based embodied reading is made possible.

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<sup>248</sup>The 'New Aesthetic,' as I discussed in the last chapter, includes contemplations of such possibilities of machines 'looking back' at humans.



Webcam captures the image and movements of the reader in Serge Bouchardon's *Déprise*.

The reader's only guard against the exposure she feels as a result of confrontation with their own image is the fact that this may be assuaged somewhat by blurring the image to a swirl with the cursor.<sup>249</sup> Their autonomy facing the text is limited. The reader eventually takes back the ability to manipulate the animation on the screen, and as they brush the touchpad, clusters of white letters appear to the soundtrack of a rustling buzz. 'Arrêter de tourner en rond.'

A text box appears without any instruction to the reader. As she attempts to type a text at random, the action of her fingers on the keyboard causes the next part of the pre-composed text to appear.<sup>250</sup> This dissonance between the tactile information that the reader attempts to type and the visual component of the action, the letters that actually appear in the text box, adds a further layer of disorientation to the reader's attempt to engage with the work interactively. As before, their capacity to contribute to the text is challenged.

The text which appears reads 'Je fais tout pour maîtriser le cours de ma vie. Je choisis mes émotions.' Ultimately, however, even this text of empowerment starts to appear as garbled text. The reader's embodied experience thus mirrors the notion of grasp as it is explored in the narrative, as an abstract and elusive experience. The

<sup>249</sup>This is rather more vague and less precise or responsive than techniques mentioned in Simanowski's chapter in *Digital Art and Meaning*, 'Interactive Installations,' which describes works in which the viewer's image becomes less clear the closer they come to the work. Ibid., pp.139-41.

<sup>250</sup>This feature, a text box that displays pre-recorded text as the reader types their own entry, may also be found in the texts at 'Anonymes.net,' Multiple authors, *v1, v2, v3* (2002) <[www.anonymes.net](http://www.anonymes.net)> [accessed 29 May 2018].

varying success of the reader's interventions physically echoes the narrator's troubled experiences of slippage.

The reader's failure to synchronise the progressions of the text with their interactive attempts made to control some of its components takes on the significance of a physical enactment that alludes to the experience narrated. The reader's physical experience is thus engaged and conditioned by the text such as to align with the narrator's fraught experience, in a physical and mechanical literalisation of the feelings of disorientation and powerlessness being described by the narrator, with the dynamic text acting as a mediatory link between the experiences of embodied reading and narrated, represented experience.

### **Interactive text: *mode d'emploi***

Emphasis on user-friendly methods of reading, often integrated earnestly by American authors of digital works, is not the aim of *Déprise*. In the latter, the narrator's and the reader's experiences become entwined, and there is a fluctuating dynamic of convergence and divergence that apparently prevents a unification of the two. Indeed, it might be argued that it is the very oscillation experienced by the reader between empowerment and transparency and impotence and *déprise* that links their reading experience to the stress and varying lucidity of the narrator.

The grappling reader is only ever testing their motions on the mouse or on the touchpad to see whether these may influence some components of the text, many of which are inalterable parts of the animation. The reader of *Déprise* thus experiences their autonomy being questioned in a more complicated way than the reader of a work such as *Labylogue* or *MetaPolis*, in whose cases the display and legibility of the text are never fully determined by the individual reader's actions, but rather are determined by the intersecting actions and articulations of the exhibition visitors' interactions within the extended scope of the work.

By contrast, the reader of a text such as *Déprise* is engaged in an ongoing and evolving experiment with the work, which never completely fulfils the promise that once the reader has grasped the balance and repercussions of gesture needed to make their way through the text successfully, they will experience the text as intended. The ultimate text is thus bound up as much in these experimental fumbblings as in the narrative that these gestures and glitches circumscribe. The tactile aspect of these

works, furthermore, traces a physical link between the reader and the tools that constitute and project the work, thus drawing the reader's physical body into the procedural system of the work as instrumental components and also underscoring the body of the reader as a site of agency and influence in relation to the digital work.

In this way, then, the comparison of these two kinds of text allows us to see how gesture and gesticulatory interaction with digital texts might be mobilised in such a way as to create an engaging, embodied experience of readership that reinforces the experiences described on an intradiegetic level, often interpreting these physically in addition to the ocularcentric interpretative modes of hermeneutic readership.

*Déprise* rather blurs the factors brought about by readerly interaction and those that enter the work of their own accord, and with a timing that the reader cannot control. The text also vanishes within time frames outside of the reader's control, without allowing the reader to adjust the parameters of display by means of interactive gestures.

In this sense, the text displays a clear affinity with the 'esthétique de la frustration,' a tendency with which mainly French digital texts may be seen to engage. A notion mentioned previously in this thesis, elaborated by the French digital poet Philippe Bootz, the 'esthétique de la frustration' aggravates the limits of writing and readership: it is often adopted by works so that these display text very copiously, at a pace that is too accelerated for the reader to interpret and consider the content, or else placing deliberate obstacles in the reader's path.<sup>251</sup>

In some sense, this profusion serves to empower the text, giving it a limitlessness that endows the text with power, elsewhere endowed upon the Work by its unity and complete, structurally recognisable nature. The continual movement of Text serves to remind the reader that writing in this vein is aiming for something beyond, and larger than, the confines of the print Work. Indeed, Bouchardon writes of an 'opening' of literariness by resisting material unity of the work in one chapter of *E-formes*:

En effet, cette esthétique de la matérialité semble entraîner une dilution de la frontière entre littérature et arts numériques. Doit-on considérer que la

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<sup>251</sup>Philippe Bootz, *Philippe Bootz* (2006)

<<http://www.olats.org/livresetudes/basiques/litteraturenumerique/biographiePhBootz.php>> [accessed 6 March 2018].



littérature va se diluer en empruntant cette voie, ou bien que la littérature numérique va constituer un nouveau paradigme littéraire susceptible d'ouvrir la littérarité ?<sup>252</sup>

### **Bouchardon's *Toucher*: a menu of textual gestures**

*Déprise* is not the first work in which Bouchardon considers the incorporation and questioning of haptic experience via the digital text. Bouchardon's 2009 work, *Toucher*, created with Kevin Carpentier and Stéphanie Spenlé, is a work very clearly dedicated to the exploration of tactile experience.<sup>253</sup> Of course, the creators are careful to underscore in their presentation of the work, it is a mediated experience of touch, a 'toucher prosthetisé,' that is offered to the reader of *Toucher*.<sup>254</sup>

Through the main menu of the work the reader may access five different scenes, as well as a sixth that is hidden in the menu interface. Each corresponding to modes of touch, these 'tableaux' are: 1. Mouvoir 2. Caresser 3. Taper 4. Étaler 5. Souffler 6. Frôler.<sup>255</sup> The first five of these verbs each correspond to a finger of the main menu image of an outreached hand. In the first part, the words must be 'touched' in order for them to be moved around and replaced. In the second part, the reader must stroke the screen with the cursor as they are guided by the sound of the animation, in order to construct a shape that appears after a certain amount of *caresses*.

The third section introduces 'le toucher agressif': the reader must kill a fly that appears in the form of a caligram in order to gain access to the text. The reader's clicks on the screen correspond to sounds of shattering glass, as if a pane were actually being struck by the clicking gesture. This aural dimension helps to overlay the act of clicking with a context-specific significance that would otherwise be difficult to convey, demonstrating a circumvention of the limitations of incorporating gestures, the solution to which is nonetheless ludic and amusing.

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<sup>252</sup>Ibid, p.144.

<sup>253</sup>Serge Bouchardon, *Toucher* (2009) <<http://www.utc.fr/~bouchard/TOUCHER/>> [accessed 6 March 2018].

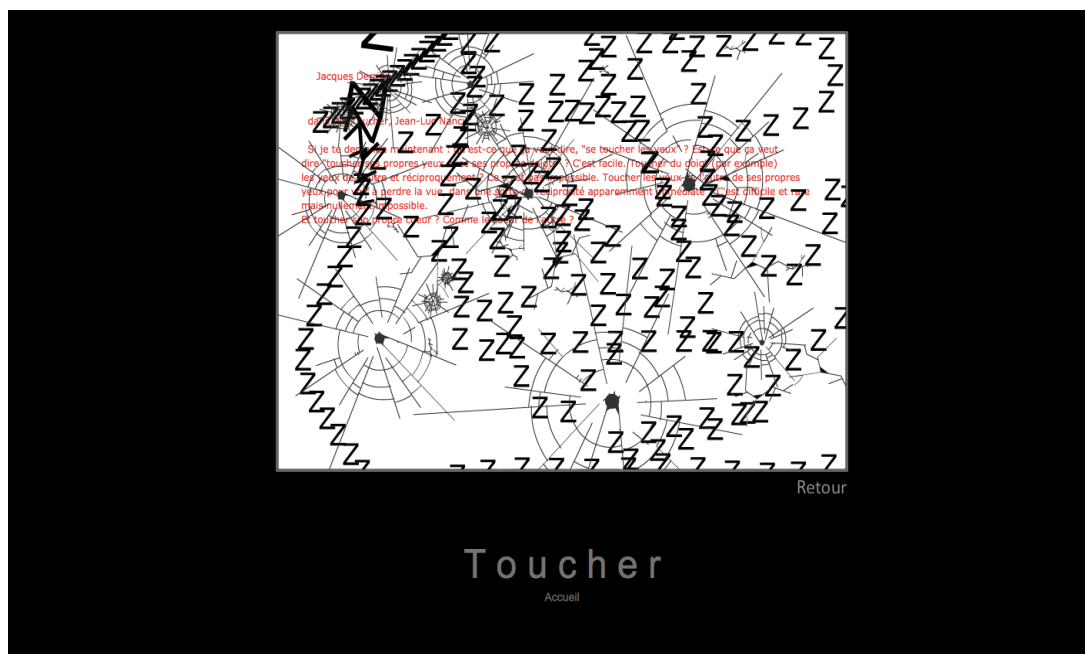
<sup>254</sup>Bouchardon et al, *Toucher: Présentation* (2009)

<<http://www.utc.fr/~bouchard/TOUCHER/docs/presentation-toucher.pdf>> [accessed 6 March 2018].

<sup>255</sup>This sixth element is somewhat hidden, to the right of the pinky finger on the 'Toucher' menu, and operates using the webcam.

Extending the metaphor, all the while remaining within the representative confines of the equipment, cracks are sketched in the areas of the screen that the reader has ‘struck’ with the cursor. While this section represents a multimedia approach to the scene, and the caligram elements link this part of the work to historical, experimental approaches to the literary, the combination of these is somewhat clumsy.

The minor adjustments made that allow for the contextualisation of the gesture through the addition of a generic-sound stock sample (the almost slapstick sound effect of shattering glass) barely masks the heavy degree of mediation involved in constructing this part of the text and is not successful in making the reader feel that they are swatting an actual fly, but rather experiencing a gamified and pixelated rendering of the experience whose inclusion in the work serves little purpose beyond the juxtaposition of tactile methods and the relationships of these to literary arrangement.



Part 3 of *Toucher*: ‘Taper’

The fourth section of *Toucher* requires that the reader proceed with painterly strokes of the cursor that play upon the sounds that are heard and questions of spatialization in relation to these sounds. The fifth section represents a shift away from manual

interaction with the text and invites the reader to blow into a microphone in order to read, and subsequently to disperse the text.

This part is one of the most interesting, as it represents a transfer or translation of the sensual media of expiration into visual media in the form of the rearrangement of letters. This consideration of possible translation of bodily elements into textual results that furthermore show signs of spatial responsivity is much more convincing in terms of its engagement of the reader's body than the caligram fly sequence, which is too closely redolent of the less nuanced key-bashing of simple video games.

The implications for human-computer-text coextensivity as this may be represented through bodily involvement are also more refined and subtle. The sixth part of the animation, the link to which is hidden in the menu interface, requires a webcam and allows the reader to touch the text with their eyes, hands, or whatever other body part they may engage for reading.

As this brief description should then demonstrate, *Toucher* exhibits a greater repertoire of interactive gestures and actions that engage the body in the textual navigations that support readership. *Toucher* is a text that, to a much greater degree than *Déprise*, specifically takes as its subject as well as its *modus operandi* these interventions and their texture. Rather than embedding the reader's interventions in a narrative to which they relate or refer, however, *Toucher* consists of various philosophical excerpts that relate to physical and haptic experience. In this privileging of a range of gestures, the text runs the risk of being received as more of a menu list of sample tactile methods than as a work whose chapters elaborate on these to a greater degree, incorporating them in a narrative scheme rather than simply illustrating their use.

Such an assumption, I would argue, is not entirely undeserved. *Toucher* nonetheless unveils promising routes for the incorporation of physical interactivity in digital works to come. The fact that the reader may blow into the microphone, for instance, represents the possibility for embodied engagement of the reader with intradiegetic descriptions of temperature, climate, eating or drinking within a broader interactive narrative work.

The feature is in this case, however, mobilised as a medium for the display, arrangement and dispersal of text. The physical contribution of the reader thus connotes effort, rather than bearing any theatrical or metaphorical meaning, but this

effort may be seen as mimetic in the sense that the reader's body becomes part of the machine that moves and operates the text.

### **Conclusion**

What conclusions might we draw from the juxtaposition of these texts, and of the gesticulatory and embodied modes of digital readership they engender, of which I have undertaken an initial exploration here? Despite the various points of comparability of the texts to which I have referred and the apparently shared implications of gestural and embodied interaction with these, I would like to underscore the way in which these texts incorporate and engender contrasting experiences of digital textuality and of readership.

Tactile and individual reading has proven to facilitate the setting of the physical body of the reader into relation with the physical components of the text-bearing device in a way that does not challenge but indeed suggests the scope for reinforcing literary and narrative forms. Stylistic textual components such as features that imply the author's interaction with the 'esthétique de la frustration' may be more clearly felt in the case of individual, private reading than in the cluttered and overlapping spaces of responsive and fluctuating text installations. Both modes of textual creation have in common, however, their inscription of the text as a tangible element outside of its source, whether in the body or in the reader's environment.

These more remote and collective experiences may be seen to gain in demonstrable value and absorbing, evolving qualities at the same time as these sacrifice the specificity and responsive clarity of a tactile text to be engaged with by a single reader at a time. Instead influenced by many intermingled voices, the texts experienced as installations have a tendency to become densely woven reflections of the interactions they encircle.

Composed of so many intersecting influences, the incorporation of features such as deliberate glitches is not framed by the subtlety required for the consideration or questioning of these as part of the work. The installations must thus be surrendered somewhat to the uncoordinated and interfering movements of their reader/visitors. The result of this is an aesthetic that suggests a visual approach to communicative technologies, rather than a literary transformation of these. One might argue that experiencing text in the body is more akin to private readership, in terms of a sense of

ownership and responsibility on the part of the reader for her responses to the work, as distinct from experiencing text as part of a spatial environment which is more like a text that simply is in a state of unfolding, regardless of who might wander in or out of the exhibition space. The text in the latter case might respond the visitors' entry, but in general continues to run whether actively encouraged and fuelled by readerly participation or otherwise.

As my comparison of two types of physical experiences of textuality has shown, then, the single reader allows for the contemplation of aesthetics of frustration and fluctuation as facets of the single work in a way that would be less visible or less tangible in a work involving multiple participants. More significantly, it might be argued that the overlaying of readerly gesture upon works such as Bouchardon's *Déprise* represent the possibility of expanding the literary via such modes of gestural and interactive textuality. The exhibited texts, however, are crucial insofar as these demonstrate the differentiation still possible between Text and Work when considering different manifestations of the digital.

In the case of Bouchardon's texts, the narrative is experienced as one that is reinforced by the reader's active, gestural interaction with the work. As the sole reader, experiencing the work in private, the reader of Bouchardon's text may experience the aesthetic of frustration as one that is applied intimately in the work, causing an affective response in the reader that, in the case of *Déprise*, aligns the reader's distress or sense of slippage with that which is described intradiegetically.

In the case of the installations I have discussed, on the other hand, the frustrating dimension of copious and evasive digital textualities is less of a personal issue than an integrated feature and comment upon the phenomena of digital communications and inscription proper. The elsewhere 'frustrating' qualities of digital textuality as these may be experienced in *Labylogue* and *MetaPolis* are not considered as such by virtue of the fact that the reading experience is a shared one: the reader experiences a sense of collective and collaborative management of the work's content, in whose generation they are involved. It follows, then, that elements received as frustrating and unmanageable in the online text read by an individual reader, feel intuitive and consequential in the case of the installations.

There is no sense of an 'internal' narrative, however, in the case of the installations, as there is for the online works, but rather the work absorbs its cues and

content from the exhibition visitors that mill around it. This mirroring of the external recipient of the work thus challenges the ‘literary’ understanding of such works.

While participatory elements are brought to intersect quite smoothly with the narrative intentions of the creator in the case of *Déprise*, in the installations and other works, perhaps even including *Toucher*, gesture constitutes, rather than supports and extends, the work.

I have noted in my analysis of these texts that gesture may serve as a factor that sharpens the experience of elusive textuality, for example, making the ‘esthétique de la frustration’ not only an observable characteristic of certain digital texts but in fact a tangible and highly pertinent aspect of their readership. The obstacles or features added to these texts may thus be seen as coherent with this project of interactive engagement, and the factors that initially disorientate the reader tend to be soluble after a minimal amount of experimental probing.

It is true that in these cases, much of the inalienable functionality of the digital text is concealed/withheld from the reader’s experience, and the easy and seemingly immediate navigability of the text through gesture and physical positioning produces a rather misleading mystification of the mechanical operations on which the production of these effects actually depends.

Gesture in Bouchardon’s work is made to appear as corresponding directly to its textual and narrative repercussions, without addressing the technical mediation that binds the two. The work of Serge Bouchardon, in the case of *Déprise*, for example, demonstrates a refusal to present this kind of reconciliation of the reader with the text through a false ease of reading digital textuality.

The work instead demonstrates the instabilities and obscure points of the digital text, which not only resist conventional readership but also frustrate many of the reader’s experimental attempts at adapting reading strategies. For writers such as Bouchardon, it is this type of approach, deliberately flawed, that represents a truly transparent relation to digital works, rather than an approach that attempts to gloss over any of these works’ unfamiliar or uncontrollable components. Bouchardon’s texts, as I have demonstrated in my analyses, refuse an enshrinement of the reader’s gesture as an operation that may always be translatable to the work, the results thereof displayed by responsive textuality, without any acknowledgement of an interface between the two.

Instead, the text in these instances is displayed as variably ‘comprehending’ the physical actions directed towards it, often appearing to rebel against or simply not to register the reader’s intentions. In this way, the underlying materiality of the digital text is indirectly asserted through the legible forms it adopts, as well as, simultaneously, its independence from many factors and imperatives from the physical world that might be brought to bear thereon.

Many French digital authors consider these blind spots necessary areas for the reader’s traversal in order that they better understand the complexity and unique fabric of the digital text, and indeed they often implant such features deliberately, provoking contemplation of these themes in the context of a narrative or experiential text. The installations I have discussed here, *Labylogue* and *MetaPolis*, demonstrate how the contemplation of digital textuality might take place on the level of typographic dimensionality rather than technical components. In these instances, however, without the tactile and direct sense demanded from the reader of Bouchardon’s texts, textuality is experienced as an unlatched and hands-off phenomenon. The reader’s experience thereof is more coherently incidental, as well as subject to pervasive interference.

It might, then, be concluded that embodied and gestural interaction may be experienced in relation to digital texts in highly divergent ways, depending on the scale of the work in physical terms and the curious factor of collective reading/viewing creating a kind of interference effect that tends to be accepted with a more passive disengagement than in the case of a private reading, whereby the reader typically experiences the smooth running of the text as their responsibility.

On the one hand, a text that encourages the reader to interact ably with the constituting elements of digital textuality may thereby omit considerations of the hardware and coding processes through which these texts necessarily pass, creating a reading experience of immersion whereby the materials of transmission and display remain, as in conventional reading, somewhat secondary. The interactive or virtual dimensions instead manifest themselves in contemplations of possibilities for spatial innovation: the dimensional reimaginings of text that are achieved in *Labylogue* and *MetaPolis*, for example.

The experience of interactive, online textuality corresponds to more of a physical struggle or effort that takes the materials that produce and display digital

texts as its site. In these cases, the user will inevitably encounter frustrating slippages, whereby either the text that is being read may act independently of the gestural instructions the reader attempts to supply, or indeed the reader cannot detect whether the sequences or shifts they are observing even relate to these physical interventions they are making.<sup>256</sup> We might, finally, interpret the frustrating elements experienced as a slipperiness of digital text as encountered in the context of *lecture privée* as a comment on the ill-fitting template the stabler *oeuvre* proves to be for these new forms of individual, take-home reading, and a call for the development of new modes of reading to accommodate this curious overspill.

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<sup>256</sup>For further close reading of Bouchardon's texts, see Serge Bouchardon, *Littérature numérique: le récit interactif*.



## Chapter 6: The Metapoetics of Mobile Apps and Spam Literatures<sup>257</sup>

### **Introduction**

The embedded nature of digital literary forms, that of works which are typically presented nowadays on devices connected to the internet, and the resultant merging of these with the quotidian landscape of the device user, both in virtual and physical terms, requires a careful analysis of whether and how the material deriving from these sources, in some cases marked to some degree as literary and in others less evidently underpinned by artistic intentionality, differs from that which surrounds it.

Delving further into these questions, we might wonder how these works challenge the coextensivity of virtual and ‘real’ physical spaces, and whether digital literatures inherit the merging of tangible and intangible worlds arguably hitherto performed by more traditional works of printed fiction and narrative. These questions traverse some of the more internal and proprioceptive dimensions of the reading experience, as well as the intention of the author in creating a work that challenges and addresses these.

Does the creation of digital works for electronic devices, and in particular the containment of these as unexpected or undetected elements within the familiar bodies of emails or mobile applications, then represent an attempt to smuggle a literary experience into the reader’s workload or agenda through an unmarked parcel?

If it is indeed the case that the affirmation and preservation of the distinct identity and function of these bodies of content must be addressed, then the articulation and reception of this difference brings its own set of challenges for both

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<sup>257</sup>My use here of the term ‘metapoetics’ is inspired by Martial Martin’s ‘L’irruption d’une nouvelle forme narrative: les ‘alternate reality games’ in *E-formes: Écritures visuelles sur supports numériques*, ed. by Alexandra Saemmer and Monique Maza (Saint-Étienne: Publications de l’Université de Saint-Étienne, 2008), p.58: ‘Très clairement, les ARG participent, à la fois d’une narrativisation de l’Internet et d’une méta-poétique de l’Internet: ils savent combien la théorie sur ce nouveau média se doit de prendre en compte l’usage des internautes et à quel point le récit s’impose pour rendre intelligible l’ensemble de ces expériences.’

the writers/senders and readers/receivers of such works. This chapter shall explore the various ways in which recent e-literatures have been hosted on devices that allow and entail the inclusion of 'spam,' e-mail or text message components, as well as examining the case of mobile applications designed to host narrative content.

As in the earlier chapters of this thesis, I shall pay particular attention to works emerging from the French context, though it should be understood that such works are influenced and catalysed by a global creative context of mediated exchange and overlap. I shall, accordingly, draw on works originating outside of France, published in languages other than French, where these provide fruitful comparisons and distinctions.

In this chapter I shall also explore what the potential scope is for such works to renegotiate textual space and rewrite the personal and quotidian spatial and textual experience of the reader. One might expect that literary reimagining of forms such as the email or mass-posted spam message could be interpreted as performing something of a recuperative gesture, or at least a gesture of embellishment, overlaying these spaces with narrative and poetic fragments, that are grafted onto the familiar surfaces of the reader/device user's practical and traditionally extradiegetic existence.

A closer examination of the works, how these are constructed and conceived by their makers and how these ultimately operate is required in order to respond to such assumptions. Turning from questions of textual aesthetics and form to the apparatus of display, the migration of literary works into mobile forms represents a radical shift in the understanding of the function and experience of the literary text. The appearance of narrative works on tactile devices, in particular, opposes the consideration of literary reading as a domestic or sedentary practice, instead seeing the reading of fictional works as an activity inscribed within the shifting environments of the mobile reader.

Certainly, the tactile aspect also entails a revisitation of thoughts and theories pertaining to embodied reading: where once readers leafed through crisp and dog-eared pages, the cool arrival of the glassy, illuminated device screen as a site of reading represents a dramatic break with this drier model of readerly touch. Sandy Baldwin, in his work *The Internet Unconscious*, proposes that the glassy screen of tactile devices represents no more direct a form of touch in relation to the work than the printed page – indeed, it seems that Baldwin even argues for an augmented

disappointment in terms of distance from the work experienced on touching the apparently illuminating window into the work, which on application of physical contact simply reveals itself as a cold barrier:

There is the screen that I touch: it is glass, it is chrome, but the words are deeper; they are not on the screen. Fanning my fingers on the screen, touching its cool glass, I get nothing but smooth surface. Licking the screen, rubbing my chest on it, none of these acts brings me closer to the other side. Do not talk to me about haptics or VR [...] all of which only reinforce the gap. The membrane is absolute.<sup>258</sup>

The mobility of the work such as that engendered by the housing of narratives in mobile applications is hardly a new phenomenon, however, nor is it unique to works in electronic formats; what is significant in the case of the works I shall discuss here is, rather, the state of connectivity of the work, and the potential for the work to no longer be passively transported, but rather to autonomously or with assistance from the reader, engage with its virtual and physical situations at once through advances in and incorporation of technologies such as GPS.

By employing the notion of ‘metapoetics’ in this chapter and in this context, I am striving to designate the kind of artistic effects created through certain digital works’ deliberate engagement with and blurring with the physical devices on which they are displayed, the way in which certain tasks and gestures are interpolated with narrative contours by the text and its construction or operation, and the way in which the space of the narrative is thus brought to overlay the reader’s immediate physical surroundings.

In the fourth chapter, I evoked Gérard Genette’s idea of the paratext, in discussing the reader’s required gesticulatory engagement with Annie Abrahams’ work, *Séparation*. Here I wish to discuss a subtler metatextual possibility, that has less to do with the body, and more to do with the material and physical enframing of the text. As Alexandra Saemmer notes in her article, ‘Some reflections on the iconicity of digital texts’:

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<sup>258</sup>Sandy Baldwin, *The Internet Unconscious: On the Subject of Electronic Literature* (London: Bloomsbury, 2015), p.7.

As pointed out by Ryan (2001, p. 349), a major field of twentieth century literature has condemned immersion as a numbing, psychologically and politically dangerous delusion. Instead of urging readers to dive in a fictional world, or to turn linguistic signs into a “cinema for the mind”, this particular field of literature has focused on the construction of the text in itself. Digital literature has largely followed post-modern paradigms for a long time and experimented with kaleidoscopic text games. It sometimes even considered the exploration of the possibilities of the device more important than the reading of a specific bit of text.<sup>259</sup>

Ryan’s revisitation of literary immersion affirms the latter as an experience that has much to do with activity beyond the apparent boundaries of the text displayed, to the point that the text is no longer really conceived of in terms of its ‘content’ so much as the points at which and ways in which this meets with the physical surroundings of the text and its outward form. In the previous chapter, I examined how two works by Serge Bouchardon, *Toucher* and *Déprise*, draw on physicalities outside of the text in the form of readerly gesture, in order to experiment with interactivity as a way of expanding the site of reading and striving to create what Roberto Simanowski would term a ‘semiotic body.’<sup>260</sup>

I shall now move onto the example of mobile application narratives, comparing the tactility of Bouchardon’s *Agir* (2016) with another mobile app narrative by Rief Larson, *Entrances and Exits* (2016). Through this comparison I wish to see how the reading experience changes when the physical orientation of the reader is joined with their tactile reading, and question whether the semiotic body might experience a semiotics of its surrounding environment as a result of the narrative’s connected elements.

### **Bouchardon’s mobile application narrative *Agir* (2016)**

On 23 December 2016, the French digital author Serge Bouchardon released *Agir*, an application containing a single narrative work designed to be read on mobile devices, such as iPhone and Android mobile phones. Available in French as *Agir* and English as *Do it*, Bouchardon’s work refers to its location and presentation on the device of its reader through cunning word play and aesthetic effects that engender tactile

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<sup>259</sup>Alexandra Saemmer, ‘Some reflections on the iconicity of digital texts,’ *Language and Communication*, 33.1, (2013), 1-7.

<sup>260</sup>*Ibid.*

interventions on the screen that displays the work. The home screen of *Agir* invites the reader: ‘Maintenant, agissez: Récit – Tableaux – Informations.’ Similar to the categorised tactile experiences of touch encountered in *Toucher*, *Agir* offers the reader four different interactive experiences, based on verbs of action. These are listed under the ‘informations’ section as: ‘s’adapter, agiter, éclairer, oublier.’ In the opening screen, the reader must touch the ‘A’ of *Agir*, which transforms into the verb Adapter. The next screen confesses ‘J’ai peur de ne pas savoir m’adapter.’ The middle section of this screen contains a red box enclosing the text ‘Mais je dois avant tout changer de cadre.’ Below this box the screen reads ‘Pour élargir mon champ de vision.’

This verbal clue prompts the reader to touch and drag the outline of this red box, which does not expand as expected but rather shrinks to a small rectangle, containing the single word ‘Instable’ and a small arrow pointing towards the bottom right hand corner. The reader may now enlarge this box by dragging with the fingertips on their device screen, until the box reaches the full height and width of the screen. The text that appears within warns ‘Ma trajectoire est tout sauf rectiligne...je fais des sorties de route.’



Again, the red outline shrinks to ‘Instable,’ with the recurrent arrow icon nonetheless encouraging the reader to explore further. The rectangle expands only slightly this time: ‘Tout est si instable autour de moi. Changeant. Mouvant. Je perds mes repères.’ On attempting to expand this screen, the reader manages to manipulate the shape and

size of the outline, but the text stays the same this time, emphasising the different visual elements at work in the app narrative through a refusal to synchronise these smoothly.

The next, smaller box to appear is a slight variation: ‘Instable sentiment.’ The next screen is an elaboration on the previous lines, ‘Tout est si instable...’ “‘Il faut s’adapter.’ Être mobile. Flexible. Le temps s’accélère. [...] Réseau, vitesse, mobilité. Voilà mes maîtres mots.’ The text speaks of the pace of things preventing the author being able to ‘raconter ma vie. En tout cas pas de façon linéaire [...] Je dois m’adapter.’ The button that appears below reads ‘AGIR,’ leading the reader back to the opening screen. The sequence appears to be identical on subsequent readings, although the reader now taps and drags her way through the text with greater assurance, having found the required gestures the first time around.

The key is that she must adapt, and rather than touching the ‘A’ of *Agir* a second time, they must learn that a sequence of the narrative opens on touching each letter. This is not totally clear at first sight; rather it must be learnt by the reader through experimentation – and often frustration, on circling the same sequence each time before attempting this new strategy. The ‘G’ leads to a screen that reads, in white text with no border: ‘Je dois être plus dynamique. Il faut que je me secoue...’ Tapping the screen, the reader is next shown a screen of moving letters: the device vibrates as the letters move, lending these a kind of false weight in their floating.



Tapping the 'changer' button gives the reader a new message: the letters fall into place to read 'Je me vois triompher pour toujours.' The letters escape on attempting to touch these, and new formations display various other verbs. The 'changer' button also offers new text to frame these scrambled verbs 'Je me vois maîtriser toujours'. The reader by now has entered a rhythm of tapping the 'changer' button to display a new message 'Je me vois gagner pour toujours.' Eventually tiring of this section, the 'Agir' button at the bottom of the screen takes the reader back to the main menu.

The 'I' sequence, 'Éclairer,' opens on the image of a torch 'Je cherche un éclairage pour donner du sens.' The reader swipes across to light the screen and this takes them to a subsequent sequence whereby they must turn the device in order to 'find' the four fragments. The circle of light that represents the flashlight's end bounces inside the screen, redolent of an old pinball machine. The text behind reads 'Si proche/Entrevoir/La fin/Si loin.'

The 'Agir' button appears once again at the bottom of the screen, and the reader, on tapping this, finds herself once again at the main menu page. The final part of a linear reading of *Agir*, the R sequence, opens on the verb 'Oublier'. 'On me dit souvent: "La meilleure façon de résoudre ses problèmes, c'est de les oublier.' A white rectangle appears 'Que voudrais-je oublier?' The reader may enter text in this box, pressing the 'oublier' button below.

In my reading I typed, rather unoriginally, 'mes soucis,' and after pressing the 'oublier' button, the next screen reads 'Mes soucis,' spelled out in red upper case letters. 'Le temps me permettra peut-être d'oublier.' Below this phrase the 'Agir' button appears once more, and the reader taps this, returning once again to the home screen and rounding off the reading of the text's four sequences.

Unlike other mobile applications, Bouchardon's app does not send notifications to the mobile device user outside of the latter's deliberate engagement with the app. The reader is not reminded, for example, to pick up where they left off in their perusal of the work. The ability or authority given to the app content to demand the reader's attention, aside from their express opening and reading thereof, is thus very limited, likening its installation to the dormant, peripheral presence, broken by voluntary, active engagement on the part of the reader, of a print book.

The issue of its interactivity in *Agir* versus that which is accommodated, say, by more evidently networked mobile applications, which allow for comments on posts and internal messaging which interweave with the applications' written and audiovisual content, raises the question of the nature of participation as this may apply to visual literary material, as distinct from sound and image content, interlinked by chains of user comments.

It might be imagined that, in years to come, participatory literary narrative applications for mobile devices will appear, which allow readers to contribute directly to the work, composing comments that may be viewed and modified by other readers. This kind of participatory dynamic has already been noted in Xavier Malbreil's online work *Le Livre des Morts*. Furthermore, formal precedents do exist for applications that accommodate this kind of interweaving of commentary and content, and so it is not so much practical concerns of structure that would prevent the composition of such a work but more the conceptual and slightly didactic efforts necessary in introducing readers to such usages as part of a fictional work, rather than the more familiar overlapping writings, images and interactions that are commonplace across social media applications and sites.

One cannot help but think back, when entertaining such possibilities, to past attempts at collaborative networked creation, such as that undertaken in 'Épreuves d'écriture,' a writing experiment I have already discussed in chapter three, which encouraged writers to dive into a networked string of modifiable and interactive writings. 'Épreuves d'écriture' saw its participants happily commenting on and reacting to the keyword terms offered by those behind the experiment, the organisers of the exhibition *Les Immatériaux*, Jean-François Lyotard and Thierry Chaput, as raw materials of the project, designed to elicit written responses, however participants tended to restrict participation to the contribution of their own, enclosed comments, and shied away from modifying the contributions of other writers.

While, then, the interactive commentary that proliferates online below news articles, which, although mediated as forms of 'conversation,' are nonetheless easily equated with dialogue and debate as these are undertaken in real life, is alive and well, the creative realm is still characterised by a certain reverence for the individual author or writing collective, to whom the work is attributed, noting the reassuring presence of these writers' or groups' particular style and tone.



This is not to say that works do not exist that are undoing such constraints: I mention the anonymous online text v2 in the previous chapter, for instance, but it might be observed that participatory networked creation remains a rather difficult terrain to navigate, attracting fewer participants certainly than online news forums or comparable platforms.

### **Mobile applications as literary forms**

Bouchardon's model, that of the mobile app constructed to host a particular narrative, allows for comparison with similar works, such as Rief Larsen's app narrative, 'Entrances and Exits,' released in January 2016 in collaboration with Visual Editions.<sup>261</sup> Larsen's app was launched as one of the first in Visual Editions' 'Editions at Play' series, and entails the situation of a love story in the familiar, functional format of Google Street View. At first, the narrative presented in 'Entrances and Exits' appears to be reworking spatial relations on a very different scale to those involved in Bouchardon's narrative.

The enclosed routes displayed on the reader's screen gesture to much larger and less confined spaces in the physical world. In his previous, print texts, Larson unsurprisingly had experimented with illustration, much of which incorporated cartographical material.<sup>262</sup> The employment of Google Maps, however, whose quotidian aesthetic is arguably much more familiar to the average reader than that of a print map, allows for a greater blurring between the parameters of fiction and everyday functionality, between the enclosed world of mobile screen representation and the physical world of 'real' space.

While this may be so, closer examination confirms that these synecdochic street scenes are used in a way that only ever symbolically departs from the screen of the mobile device. In this case, the 'external' space to which the narrative's internal routes are linked exists on an equally allusive level to the life of the narrator of Bouchardon's *Agir*. The reader of *Entrances and Exits* in some cases must rotate their body, holding the tactile device, in order to navigate the streets described by the text, just as navigation apps generally tend to update in response to the user's movements in real space. These effects are subtle, however, usually entailing rotation of the scene

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<sup>261</sup>Visual Editions, *Entrances and Exits* (2016)

<<http://visual-editions.com/entrances-and-exits-by-reif-larsen>> [accessed 6 March 2018].

<sup>262</sup>Reif Larsen, *The Selected Works of T. S. Spivet* (London: Harvill Secker, 2009).

within a single ‘street view,’ and may be easily achieved by lazily rotating the device itself, rather than through the reader’s more active movement.

*Entrances and Exits* thus creates the semblance of a narrative that engages broader, real-world spaces, whilst ultimately maintaining a remote and gestural relationship to these. The relationship to external space in Bouchardon’s ‘Agir’ is openly limited to the tactile engagement of the reader with the screen of the mobile phone or tablet on which they are reading the work, and some of the rotations of the device itself that are required to unveil some of the concealed words. In one particular sequence of *Agir*, the reader’s rotation of the device corresponds to a hazy yellow circle that is bounced around ‘inside’ the screen so that the words inscribed behind it might be made out.

This aesthetic is one that lends a particular physicality and weight to these virtual, animated images, and the rebounding ball within this space is not unlike a kind of pinball machine configuration. Rather than emanating virtual imagery outward toward the physical world, then, features such as this one see the narrative deliberately engage the opposite strategy, an endowment of physicality or material substance to virtual animations, in such a way that the three-dimensional world apparently runs in inbound continuity towards the space ‘behind’ the device screen.

The experience of space in *Entrances and Exits* does not see the reader’s direct physical environment overlaid with the narrator’s movements and sense of (dis)orientation, in such a way as might possibly be used to create interactive tunnels between the ‘real’ and the ‘virtual’ world. Instead, it almost seems to confront the reader’s expectation that such an experience should be possible and created for them, instead presenting the reader with the resultant overlapping coexistence of one form of representation within another: the familiar tool of Google Street View surrounding and entwined with the familiar descriptive mode of narrative. The juxtaposition of Larsen and Bouchardon’s works reminds us that, regardless of the resonances and aesthetics employed, the world of the work is a constructed one that may borrow from other spaces but only overcome its own confines by way of the reader’s mediation.

### **Differentiating online space**

Hitherto I have discussed the case of mobile application-based narratives, whose presentation has entailed the apparent exclusion of adjacent networked sites in favour

of a more complete conception of work as unit, of the narrative as a fenced-in subsection of digital space all of whose content demonstrates a clear relationship to the author's creation.

Furthermore, the presence of the application as part of select collection, housed on a personal device, gives the reader a greater sense of control and ownership over the work to be experienced than in the case of an online or collaborative interactive work, for example, which seems to inhabit a less guarded, open space in its occupancy of a webpage.

In *Matières textuelles sur support numérique*, Alexandra Saemmer argues for consideration of the presence of internal differentiations in networked space, through the notion of an artistic side to the Internet, which she curiously situates as adjacent to, rather than interwoven with or embedded in, the more practical and informative pages of the web. Saemmer writes: 'A côté de l'internet commercial, informatif, documentaire, s'est développé un réseau artistique encore relativement peu connu du grand public, et qui donne lieu à des trouvailles surprenantes.'<sup>263</sup>

Saemmer's formulation of online spaces as proposed above, with its implication of such a dichotomy between the artistic and the commercial, the literary and the informative, allows for an understanding of the works in the moment at which their distinction is recognised, and so the difference is detected by the reader between the work as 'trouvaille' as opposed to just one more nondescript page or message from the 'internet commercial,' but it does not extend to encompass how these works are conceived by their makers as interacting with and operating within what Saemmer cordons off as an 'internet commercial, informative, documentaire.'<sup>264</sup>

As I shall demonstrate here, an understanding of these works as ambivalently operating within this enmeshed Internet, at once informative and embedded with 'trouvailles,' is necessary in approaching these works as objects of reading and analysis. Indeed, in the case of much spampoetry and email literature, it is often squarely on this crucial ambiguity that these works are in fact founded.

To which Internet these belong, then, is a question that coyly inhabits the work, which knowingly contains the myth of such a bifurcation. The works that operate through this ambiguity between a distinguished, artistic web, and a web of bus

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<sup>263</sup>*Matières Textuelles*, p.15.

<sup>264</sup>Loc. cit.

timetables and mass marketing, in so doing question the habitual markers demanded by readers as triggers for appreciation for the work as an artistic fragment, such as metadata that forewarns the reader that they are about to enter a space of distinct interpretation and a reading whose hermeneutics allow for the addressing and indulging of subtler questions than those messages or webpages that offer straightforward information. I shall now turn to the example of Mark Veyrat's 'toto,' an email art project, in order to analyse in more detail the way in which the ostensible artistic/informative binary is interacted with, and often frustrated and parodied, by digital creators.

### **Mark Veyrat's 'email art'**

The French multimedia artist Mark Veyrat is linked, among other projects, to 'toto,' a particular form of 'email art' that first appeared within the '*société i-matériel*,' a project created in August 2000.<sup>265</sup> An artistic project based on the model of a company, the *société i-matériel* is constituted as a network.<sup>266</sup> The kinds of notions that underpin the *société i-matériel* are clearly indebted to the 1985 exhibition *Les Immatériaux*, which I discussed in the third chapter, and appear to inherit and develop many of the themes first exposed and underscored on this occasion.

The raw materials used by the *société i-matériel* are 'immaterialised' as a first step on websites or by electronic mail (referred to as 'i-mail'), before subsequent use in works created from these, including artistic installations.<sup>267</sup> 'toto, 'toujours au singulier et sans majuscule,' appeared in the *société i-matériel* in June 2001.<sup>268</sup> Created from simple combinations of zeroes and punctuation marks, these forms were created as 'portraits without qualities,' intended for distribution in the bodies of email messages. Produced in 365 different versions, toto is sent by random mass message via 'i-mail' to a constantly changing list of recipients who become both interpreters and potentially further broadcasters of these messages, implicated by reception in the task of interpretation.<sup>269</sup>

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<sup>265</sup>Marc Veyrat, 'En attendant toto,' in *E-formes*, pp.75-89.

<sup>266</sup>Loc. cit.

<sup>267</sup>Loc. cit.

<sup>268</sup>Loc. cit.

<sup>269</sup>Ibid., p.76.



toto *Jack-i-chat+*), 2006.<sup>270</sup>

Veyrat describes these images contained within ‘i-mails’ as robot portraits, childlike, vague and fragmented. These loose drawings, made up of digits and parentheses, evoke an ambiguous physicality, playing on the symbolic vehicles of inscription and the gap between the forms of the symbols themselves and forms to which these combinations of marks gesture. The message is not intended to be frozen in this format – as the email in which it is received, but rather the perspective of the reader is sought to transform it via considered reception into the nobler form of a scroll:

Obscène, littéralement maintenue en dehors de la scène de son auteur par le traitement informatique des données, la vie de ce système écran dépend du nouveau maître qu’il reçoit dans sa boîte. Celui-ci en ouvrant son courrier signe une apparence, rend l’i-magot d’une figure in possible (sic.), déroule (car le mail s’organise sur le principe du rouleau et non du livre) un ensemble d’informations, un *i matériel* désormais *in/visible*.<sup>271</sup>

In ‘En attendant toto,’ Veyrat describes the concise nature of these forms as follows:

<sup>270</sup>Marc Veyrat, *Société i matériel/i hardware company* (2006)

<<http://labs.hyper-media.eu/societe-i-materiel.html>> [accessed 6 March 2018].

<sup>271</sup>Ibid, p.86.

Essentiellement écrit, simple addition de lettres et de zéros, toto ressemble en somme à un gros mot...Crée à l'origine pour être diffusé dans le corps même d'un courrier électronique, il est réalisé à partir d'un logiciel basique, Outlook Express, proposé gratuitement par la société Microsoft, et réagit aux aléas du programme, aux paramètres de chaque ordinateur.<sup>272</sup>

In an article written by Veyrat for *DOCKS* review, a publication I have discussed in the second chapter, Veyrat writes: 'L'information est une mécanique qui s'orchestre selon une stratégie d'encerclement.'<sup>273</sup> Despite, or perhaps due to, this circular and random deployment strategy, the store of images was not fully exhausted over the course of the project: 'l'aventure-@toto est restée en fait inachevée. 351/365 toto ont été envoyé par mail pendant une année virtuelle, c'est à dire entre 2001 et 2006.'<sup>274</sup>

Veyrat's projects demonstrate a clear interest not mainly in the works themselves but in how these are contained, transmitted, and distinguished from the surrounding material environment. In addition to the 'aventure toto,' Veyrat is also behind the online gallery ('galerie virtuelle'), ©box.<sup>275</sup> This gallery consists of a portable, physical form that serves to signal the enclosure or curation dimension and thus mark the works displayed with this notion of select containment. Of course, the mixed media and mixed materiality of the gallery is very curious: moreover, the box is designed to operate as a gallery within a gallery:

©box, c'est d'abord et surtout une boîte. Une pilule monoplace, en aluminium et plexiglas (facilement démontable, transportable) qui peut être installée dans une galerie, un centre culturel, une école, une usine. Sur l'écran, les oeuvres électroniques observées sont immédiatement retransmises à l'extérieur par vidéoprojection...<sup>276</sup>

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<sup>272</sup>Ibid., p.76.

<sup>273</sup>Marc Veyrat, <[http://www.akenaton-docks.fr/DOCKSdatas\\_f/collect\\_f/auteurs\\_f/V\\_f/VEYRAT\\_F/ANIM\\_F/toto.html](http://www.akenaton-docks.fr/DOCKSdatas_f/collect_f/auteurs_f/V_f/VEYRAT_F/ANIM_F/toto.html)> [page expired; last accessed 6 March 2018].

<sup>274</sup>Ibid.

<sup>275</sup>Marc Veyrat, *Marc Veyrat: Artiste* (2008) <[http://archiveue2008.fr/impressionb355.html?url=%2FFPFUE%2Fflang%2Ffr%2Faccueil%2FSaison\\_Culturelle\\_Europeenne%2FProgramme%2FLa\\_saison\\_des\\_artistes%2Fmarc\\_veyrat](http://archiveue2008.fr/impressionb355.html?url=%2FFPFUE%2Fflang%2Ffr%2Faccueil%2FSaison_Culturelle_Europeenne%2FProgramme%2FLa_saison_des_artistes%2Fmarc_veyrat)> [accessed 6 March 2018].

<sup>276</sup>Marc Veyrat, © box (date unavailable) <[http://www.carolebrandon.com/#!/\\_\\_c-box-fr](http://www.carolebrandon.com/#!/__c-box-fr)> [accessed 6 March 2018].

More details of Veyrat's other projects may be found at the following link. Ronan Kerdreux, *Espaces sans qualités: Marc Veyrat* (2013) <<http://www.espacesansqualites.net/?p=578>> [accessed 6 March 2018].

In the next section I shall look also examine works that are disseminated via email, and which employ particular forms that challenge and undermine readers' perception of value or quality in texts.

### **Boisnard and the case of Spampoetry**

Philippe Boisnard is a French writer and multimedia artist who is particularly engaged in the creation of performance art. Boisnard has experimented with alternative apparatus of display in the composition of his works' physical components: a joystick controls what appears on screen in Boisnard's *generationécran.com*, for instance. In *E-formes*, Boisnard dedicates a full chapter to analysing Spampoetry and its *modus operandi*.<sup>277</sup> In this chapter, Boisnard quotes Lyotard as follows in this analysis of Spampoetry:

Il est de bon ton de dire que nous sommes dans une ère post-moderne, sans parfois interroger ce que cela implique. Lorsque Jean-François Lyotard définit la post-modernité, il part de la disparition des *méta-récits* et de leur *éclatement-réprise* à travers des micro-récits individualisés. L'individu, où qu'il soit, est pris selon sa position dans des confluences, des mouvements, des intersections d'énoncés.<sup>278</sup>

Boisnard, in thinking through the typical channels of promotion and diffusion that bring literary works to the reader, evokes Habermas' idea of institutional mediation as the means by which personal writings become public.<sup>279</sup> The case of a literary work, ostensibly a public form of writing, encased in a 'private' format, that of the email, typically composed for few and restricted recipients to fulfil a particular purpose, illustrates a play on presentation of writing.

Indeed, this kind of experimental practice probes how much of the 'literariness' of writing is ingrained in how the writing is unveiled: it is not with the works themselves we are interacting, Boisnard argues, but rather with the discourses that surround them. In the same chapter, Boisnard writes on the materiality of spam:

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<sup>277</sup>Philippe Boisnard, 'Le retournement des presupposés de la diffusion littéraire à partir de l'analyse de spampoetry,' *E-formes*, p.59

<sup>278</sup>*Ibid.*, p. 61.

<sup>279</sup>*Ibid.*, p.62.

Le spam, s'il est souvent comparé au publipostage des publicités dans les boîtes aux lettres de nos maisons, en est toutefois radicalement séparé. En effet, le premier point sur lequel nous pouvons établir une différence est celui de la matérialité : le spam en tant que tel n'est pas matériel, il est la duplication d'un abstract, d'un code informatique.<sup>280</sup>

Emailed spam, Boissard argues, is thus not subject to geographical or material constraints in the same way as printed junk mail tends to be. This makes it somehow 'junk' to an even greater degree: removing the constraints of printing and distribution, spam in its electronic form is a purely gratuitous form of inscription. Spampoetry, it seems, based on Boissard's description, is less a poetic form inserted within the modus operandi of email spam, but more of a spam genre created with particular, poetic considerations in mind! Boissard addresses this as follows:

Précisons que le spampoetry n'est pas un *cut-up* des spams [comme on en trouve sur spampoetry.net]. En effet, le spampoetry n'est pas repris dans un ready-writing statique des mails ou spams, mais il se détermine selon l'usage du spam; le spampoetry n'est autre qu'un spam qui est créé selon la constitution d'une certaine poétique.<sup>281</sup>

Closing his discussion, Boissard alludes to the paradoxical nature of *archivage* in the case of spampoetry: '*Ensuite de conservation*: comment les conserve-t-on ? Comment les considère-t-on ? Les archiver, n'est-ce pas par principe les abstraire de la dimension contextuelle et matérielle qui leur donne leur réalité ?'<sup>282</sup> Boissard's work has been mentioned by Roberto Simanowski, in *Reading Moving Letters*, where the latter writes of Boissard's writing as a form of parasitism or forced inhabitation of the form: 'Our email box is regularly invaded by spams. Spampoetry by Jean Philippe Boissard parasites these forms, generally regarded as parasitic, by literary proposals.'<sup>283</sup>

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<sup>280</sup>Ibid., p.68.

<sup>281</sup>Ibid., p.70.

<sup>282</sup>Ibid., p.74.

<sup>283</sup>Alexandra Saemmer, 'Digital Literature – In Search of a Discipline?' in *Reading Moving Letters: Digital Literature in Research and Teaching: A Handbook*, ed. by Simanowski, Schäfer, Gendolla (Bielefeld: Transcript; Piscataway, N.J.: Transaction Publishing, 2010), p.334.



### **Jean Pierre Balpe's textbots**

I shall briefly cite one final example, as I have touched on the literary infiltration of mobile applications, online space, and email, but have not mentioned similar experimentation with the possibilities of embedding literary and narrative material in social media. The French digital creator and theorist Jean Pierre Balpe, who has appeared as author and theorist of various digital forms throughout these chapters has, in his recent works, made use of textbots employed in various ways: on websites, in videos, on Facebook, in installations, and in shows performed on stage or on the Internet. In a kind of mimicry of more traditional literary structures, and harking back somewhat to the earlier chapters of this thesis and the notion of a 'machine author' with its own distinct voice, Balpe has created heteronyms for the works of his textbots, each of which has a specific, associated style.

Among Balpe's constructed author-posters are Marc Hodges, Germaine Proust, Maurice Roman and Louis Ganaçay. Several Facebook pages maintained by Balpe may be consulted, and these are associated with names including Ronald Cline, Benjamin Cooper, Monsieur Roman, etc. Clearly, these names tend to include slight (or less subtle) clues to their literary affiliations or intentions, such as the use of 'Roman' and 'Proust' as surnames respectively, but these details alone do not endow the presence of these pages with any suspicion as to the existence of these characters or their correspondence to a 'real-life' person.

This prompts an interrogation into the fictitious quality of individual persons' online profiles, which do not always have a greater anchorage or bolstering in reality purely by virtue of being maintained by a single individual, who imbues the content with details of their own lives and locations and creates posts which ostensibly bear a personal nuance or tone.

Similar to Veyrat and Boissard's challenging of literary writing as distinct from other forms of writing, achieved through the discreet and often unannounced concealment of this within more banal and ubiquitous forms, Balpe's social media 'authors' may also be seen to question the distinctions between artistic and communicative, corporate and personal zones of online space, in which all of these ostensibly distinct categories of material are coinhabitant and interwoven.

I shall not enter into the examination of the texts produced and shared by Balpe's textbots here, however I would like to signal these projects as operating in a similar vein to those of Veyrat and Boissard that I discussed earlier, whereby the tools of online presence and communication are drawn upon in order to engage with questions of textuality and in particular the reception of text based on form.

As a final specification, Balpe is not alone in his experimentation with forms usually used by individuals or companies to create a personal or corporate online presence: Serge Bouchardon, in his 'Digital Literature in France,' mentions Luc Dall'Armellina, whose text *Flog* is 'a combination of flux and blog'. Such a work, rather than equating the immediacy and constant refreshment of the 'feed' of text with a kind of intimacy or the reader, instead generates a sense of alienation, 'due to the speed of televisual or RSS news flux.'<sup>284</sup>

While these works, then, may in some instances encourage a slower reading that alerts us to the interpretative dimension and subsequent identification and enjoyment of textual richness and meaning, other works are produced precisely to express the impossibility of slow and considerate reading in the Internet age, characterised, among other features, by access to both an endless ream of textual material and the possibility for further production and contribution thereto.

## **Conclusion**

In my introduction to this chapter, I set forth the intention to probe the works analysed here for signs of poetic potential. Moreover, I had quite confidently held the expectation that this potential would take the form of a demonstration of the capacity of narrative works embedded in everyday technologies to overlay quotidian spaces and interfaces with a layer or metadimension of 'literary' material.

This expectation implied a certain envisioning of electronic literatures' distinctness from the surrounding materiality of the reader's world: whether this distinctness might be expected to come from more inherent, structural aspects of the work or from deliberately enunciated components of the narrative that underscore the occurrences represented as belonging to a distinct temporality or environment.

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<sup>284</sup>Ibid.

Having examined the operation of the works discussed in this chapter, and in consideration of the aims of their creators, one might conclude that such an articulation of the work as a self-contained entity is entirely contrary to the interests that encourage writers and artists to exploit these modes of creation and experimentation. Indeed, in the case of spam poetry and email literatures, the operation of the work depends and is arguably founded on the slowness of possibility that the reader might pick up and distinguish these as ‘works’ to be distinguished from the overall flow of information that floods the reader/recipient’s inbox. One very notable quality that is amusing in spam and email art in this regard is the fact that one cannot subscribe to and receive these on the basis of curiosity and prior interest, but only those who receive the works at random have access to consult these: thus a strange inverted elite of potentially disinterested individuals, albeit benefitting from access to the works, is created.

The way in which the mobile application narrative *Entrances and Exits* plays upon the reader’s physical surroundings approaches this idea of spatial reinscription to a degree, and certainly much more so than other works and forms I have encountered in this discussion. Bouchardon’s *Agir*, on the other hand, as I have shown, is operating much more within a space that considers reinscription in terms of the reader’s tactile manipulation of the device on which they read.

The creator, in the case of many of the texts I have discussed in this chapter, thus imbues the work, it would seem, with a minimally visible or identifiable sense of artistic intentionality, so as to render more acute the artistic quality of the message when detected as such by an unprepared recipient. By stripping away the kinds of provisions usually ready to hand in responding to literary or artistic works, in terms of the methodological and analytical tools and points of reference with which many people are familiar, derived from an interlinked constellation of milestones of accepted ‘cultural’ entities, the digital work in this guise is supplied to those receiving it on the basis of their willingness to interpret this with patience and a certain, agnostic approach to comparison with works of art and literature encountered elsewhere.

It naturally follows that the effects the authors of these works are endeavouring to create must also be reconsidered: rather than creating a kind of seamlessness between the narrative or poetic work and the ubiquitous technologies

used by erstwhile readers in their daily lives, the makers of these email and spam works have a much more challenging task to entrust to their recipients: that of an entirely unexpected and rather unsupported interrogation of how artistic and/or literary value might be determined.

The makers of randomly emailed literatures are therefore not merely aiming for a forceful inclusion of their works in the content encountered and read by device users, but rather they are probing the form for occasional revelations of a willingness to engage with ‘literary’ works of an unfamiliar tincture that is in fact twofold. The simple accessibility, in the practical sense, of the work does little for its promotion. Indeed, this presentation alienates the work from its original context, tasking the recipient with a procedural reception that entails interrogations first of practical questions of the work’s source and construction and second, judgemental queries as to the work’s uncertain value.

In the case of mobile application narratives, the way in which the narratives engage the reader is, of course, very different. The reader, first and foremost, and unlike in the case of spam poetry and email literatures, makes a conscious choice to embed the work within their technological system or that of their device.

The reader is thus prepared in this respect to receive the work, and has most likely been exposed in advance of reading to some descriptive or metatextual elements that already have begun to determine how they interpret and receive a work such as Bouchardon’s *Agir* or Larsen’s *Entrances and Exits* applications. Quite the contrary, to the point that the reader is entirely unaware of their status as such when first confronted with such works, and indeed they may remain so, leaving the entire experience fall aside or simply deleting the message on the basis of its apparent irrelevance or incomprehensibility.

The eventual, randomly targeted and sufficiently attentive reader of these emailed works finds themselves in rather a different situation to the reader who deliberately downloads or pays a small charge for an application-based narrative work. Moreover, a further distinction to be made between the latter works and works received at random by email, is that, similar to the way in which readers engage with print works, the application-based work is consulted, ‘opened,’ at a time of the reader’s choosing, and so the active choice of the reader to peruse and interpret the work prefaces their encounter with it.

Conversely, as I have made clear in earlier sections, the reading of a spampoetry or email literature work does not occur by way of the reader's decision to engage with such a work. The mobile application narrative, then perhaps unsurprisingly, most resembles the uncontroversial and upfront exchange of the reader with the print text. The work is deliberately downloaded, for free as in the case of Bouchardon's *Agir*, or for a small charge. This acquisition step must necessarily ensue from some exposure to the discourse surrounding the work: a reference made elsewhere, or a recommendation. The application is simply a vehicle for the presentation of and interaction with the narrative, and the form itself is alluded to by these works as part of their novelty, but without materialist comment underpinning these allusions.

The email and spam works, by contrast, may be seen as taking up these forms with a precise and critical usurpation in mind. Their critique is, of course, not of email, and the free and limitless nature of this as a vehicle for distribution of works is essentially celebrated by practices such as spampoetry diffusion. Whereas the spampoetry and email art represents a unique and unsuspected challenge to the reader, it takes up this striking quality precisely in order to arm readers against the kind of resistance these works elicit. The application narratives challenge the reader rather differently, more along the lines of the playable or ergodic work, whose traversal must be tentatively negotiated.

Does one form, might we conclude, carry a more prestigious connotation to readerly engagement than another? Surely, in addressing such questions, we must look to Bourdieu's discussions of the literary and how it is constructed as a category with internally layered markers of value and prestige.<sup>285</sup> The dismissal of accessible literatures as too easily apprehended by readers, charmed by the usable and inviting forms thereof, is a timeworn tendency, whereas the celebration of carefully, gradually navigable obscurity has often encircled more obscure, and therewith, fewer works.

Does this distinction carry across from print works to the digital sphere? It must be borne in mind that both kinds of work usually take on these kinds of reputations only in hindsight, once sufficient time has elapsed to allow for these to be situated among other forms of cultural production of their time. This assumption is

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<sup>285</sup>Pierre Bourdieu, 'Le Champ Littéraire,' *Actes de la Recherche en Sciences Sociales*, 89.1 (1991), 3-46.

one that should be incorporated generously, I argue, in considerations of digital literatures. The work exists as a representation of possibility, as the expression of a technical step, as an example offered for subsequent elaboration. Works such as those generated by the email generator, *toto*, are therefore not so much literary offerings as they are parodies of and questions regarding literary expectation and reception.

The trouble one finds in differentiating, at this point, the tenuous relevance of literary labelling insofar as these spam and email literatures drive these to their limits of applicability, is articulated by Sandy Baldwin in his introduction to *The Internet Unconscious*; Baldwin writes: 'In such a field of messiness and flux, the only possible discourse on the networked computer is one of impossibility. Everything on it must be considered as if one long invention. The Internet is a work of literature.'<sup>286</sup>

Baldwin's argument reinforces the response to these works that has been steadily emerging throughout these chapters, which is that, rather than finding a new definition of the literary work such that modes of literary reception and analysis might be transposed onto these new forms, the material qualities of text-based works should instead be read and understood such that visual and spatial elements are no longer considered as foreign to the written work, but rather continuous and conjoined elements of the work's material presence and form.<sup>287</sup>

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<sup>286</sup>Sandy Baldwin, *The Internet Unconscious*, p.3.

<sup>287</sup>Bouchardon writes 'En effet, cette esthétique de la matérialité semble entraîner une dilution de la frontière entre littérature et arts numériques doit-on considérer que la littérature va se diluer/déliter? En empruntant cette voie, ou bien que la littérature numérique va constituer un nouveau paradigme littéraire susceptible d'ouvrir la littérarité?' *New Directions in Digital Poetry*, ed. by C. T. Funkhauser (London: Bloomsbury, 2012), p.144.

## Conclusion:

Digital text and physical experience...an anticipatory redefinition of the literary?

### Overview

In the introduction to this thesis, I rather boldly stated my intention to examine the evolution of the relationship of literary creation to computing technologies, tracing the historical trajectory of tendencies and practices in France with regard to such modes of creation, such as these evolved from the Oulipo's experiments of the 1960's to the online multimedia works being produced today.

In addition to engaging in an examination of these works *per se*, I have also and more specifically undertaken a careful juxtaposition of these works and ideas in such a way as to contextualise the development and diversification of these texts in relation to various extradiegetic elements, such as publication practices and the influence of exhibition curation on the elaboration of works, situating these within a French frame in order to relate these more clearly to the works' conditions of production and factors external to the works that may have conditioned the creative tradition to some degree, such as the field's relation to literary heritage, which typically presents itself via a pronounced national slant.<sup>288</sup>

In constructing my discussion in this way, then, I have set out not only to assess the contributions that works incorporating computing technologies for literary ends have made so far to a broadening or a more substantial redefinition of understandings of literary writing more generally, but I have more precisely argued, having drawn on a deliberately reduced geographical field, for a consideration of surrounding physical and material factors in shaping certain aesthetic and creative practices that are not limited to intradiegetic manifestations within the works discussed. While, then, concerns with the artistic dimensions of textuality as 'text to

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<sup>288</sup>I see the example of the Oulipo's 'Rimbaudelaire,' works created from combinations drawn from a bank of lines from the poems of Arthur Rimbaud and Charles Baudelaire, as symptomatic of the group's search for a recognisably literary form for early e-lit: when the Oulipo set out to combine literature and computing, this passed through a somewhat performative phase whereby canonical works, lines and rhyming schemes (such as the Alexandrine) were passed through some experimental methods and processes in order to probe the early compatibility of the still-unfamiliar aesthetics and practices of computing with safely secured metonyms of the literary.

be read' are far from explicit, and do not seem to be privileged, especially in the more recent works I discuss, these works, when understood in light of their theoretical and material context, may also be read as constituting powerful comments on and criticisms of the constitutions of literary production.

The relationship of digital literatures to the notion of literariness is one that must not be read too insistently: as I have shown in my analyses of the works discussed in these chapters, the question of the literary and how literariness might be adopted and engaged with by digital works does not really trouble the writers included here, or at least not in such general terms. The designation of 'digital literature' thus represents a provocative challenge to conceptions hitherto held as to what qualifies as literary material and the criteria on which such a qualification is based: the forms discussed in the final chapter, such as Boissard's spampoetry, might be aligned with such a position with respect to the literary.

For other writers, such as Bouchardon, the term 'digital literature' or 'littérature numérique' offers a designation that serves a light indicative function in demonstrating with a reasonable degree of reliability some aspects of the nature of the works to which the term is applied. Indeed, digital works' assumption of the adjective 'literary' and the artistic designation of 'literature,' and the need this prompts for justification through explorations of the works' content and status bring to light the inextricability of literature from the institutions and forms that have been developed in order to protect and distinguish literature from other forms of written communication. It is in this regard that I have found Roland Barthes' distinction between *oeuvre* and *texte* most illuminating, finding that the works I have discussed here are enriched by an understanding thereof as modes of dwelling in and developing this liminal space between Work and Text.

Rather than aiming to reconcile elements that had been valorised in literary oeuvres with homes in new media, the Work/Text distinction, taking Barthes as a point of departure and elaborating, updating, allows for digital works such as those I have discussed here as both critical modes and methods, taking something of a sceptical backward glance at literary forebears, as well as self-conscious and rich text-based pieces in their own right. Rather than seeing these texts as impoverished relative to the established template of the literary oeuvre, then, one might instead gain



from engaging with the work of Bouchardon, Abrahams, Veyrat and others by the significance of their dynamic and ongoing flight from these templates.

### **Digital works, digital texts**

I hope that demonstrating the conducivity of digital texts to exhibition has proven helpful for viewing these in a way that resists the superlative novelty perspective of digital works as the newest, most open, most fragmentary and mobile structures thus to emerge, instead allowing these to shed some light also on the way in which the status of the literary work has remained relatively unquestioned in this gradual opening up of the realm of the digital. Moreover, exploring the contexts in which these texts unfurl and how they interact with the space of diffusion helps us to see the alternative reading to a more facile advocacy of the digital, which would amputate these texts from the problematics they have inherited and reworked from print culture. I have begun to undertake an exploration of the extent to which certain technologically assisted and supported modes of textual composition and display reconcile features of the Work with those of the Text, allowing elements of each to coinhabit liminal spaces between Work and Text, such as to illuminate the relative poverty of such polar categorisations of writing.

The merging of reading and writing that took place in the 1980's, the uniting of these in a single tool of composition and display and the pivotal place of *Les Immatériaux* all point to this combined, simultaneous reading and writing that was to characterise the mobile, open and evolving digital text. The writing experiment 'Épreuves d'écriture,' which I discussed in the third chapter, represents a pivotal point in this evolution, not least because it marks one of the earliest realisations of the impossibility of pure instances of Barthesian *texte*: to be at all contemplated, considered, registered as existent, the text needed to draw on some of the worklike recognition of the exhibition context, allowing the text to be elevated and distinguished from other forms without sacrificing the procedural dimension.

On the other hand, the use of the exhibition space to elaborate such written forms allows the literary work to take on a newly spatial quality. Symbolically enframing the text by including it in such an exhibition bestows on it a certain exemplarity, without its needing to be sealed off or bound as a more traditional work would be. The subsequent publication of the 'Épreuves d'écriture' experiment,

however, demonstrates the questions of work/text convertibility in such cases: as I have noted, Lyotard's later reference to the experiment as a 'great book' underscores the vulnerability of the procedural and unstable text as far as questions of preservation, memory, and returning to view such texts are concerned.

The digital text, while moving ever forward, should not be seen as emphatically new and breaking with every aspect of tradition to negative effect. On the subject of authorship, for example, it is important that we do not do away with this as part of the tradition that nonlinear and dispersed literatures are attempting to challenge, but rather that we allow for the coexistence of multiple conceptions of and approaches to authorship as these might arise when considering different creators of digital works. Philippe Boissard, for example, values the fact that he codes from scratch as an important facet of his authorial identity and personal creative process. Boissard affirms, "if I am interested in inventing a novel form of mapping, I am going to have to invent my own software."<sup>289</sup>

Boissard's affirmation thus reminds us that authorship and authorial intentionality are far from being outdated considerations when analyzing digital works, and so a facile depiction of the field whereby the assertion of the individual author to whom the work is attributed is only ever loosening neglects pertinent considerations of central aspects of contemporary digital literary criticism, such as the ways in which different creators as digital authors relate to code and the software on which they explore and assemble their works. The reader's inability to code is crucial to the 'esthétique de la frustration,' through which the reader is periodically reminded of the illusory nature of their understanding and control of the work: in this sense, the gap that prevents a complete dissolution into 'écriture' is maintained, with this intermediary space becoming the site for exploration.

I have found, through my research in and my readings of digital works, that despite the ever-increasing sophistication of such works, these continue to occupy a decidedly marginal position in relation to 'major,' mainstream literary cultures, which are currently still largely mapped and defined by print and editorial traditions, defined and made tangible by the presence of the visible material resources that serve as the vehicles for these and bearing the implications of curation, archivability/permanence

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<sup>289</sup>Odile Farge, "Rhétorique de la conception": Pour une prise de conscience des stratégies de l'outil de création. Proposition d'une typologie de postures d'auteurs.' (unpublished doctoral thesis, Université Paris 8, 2014), p.220.

and critical approval, of canonisation and dedicated, thematic exhaustivity and material worth that these structures entail in ultimately offering literatures as purchases with determined values per unit.

In other words, ‘literature’ still denotes a textual product enshrined as a work. One of the arguments I have formulated here, and which runs as a major, recurrent theme throughout, however, is that the French situation is marked from the outset by a deviation from the mainstream print literary tradition: as I explore in my first chapter, the Oulipo group firstly did not really accept a definition of the Ouvroir as a group of ‘literary’ practitioners, preferring to present itself as an association of adventurous polymaths.

From the outset, the Oulipo presented its texts, or *échantillons*, at exhibitions, such as the 1975 Europalia festival, which took place in Brussels, from the outset, forging an immediate link between computerised literatures and exhibition as a mode of presentation and diffusion from the moment of emergence of these earliest examples of French electronic literature. French digital practitioners today continue to favour exhibition spaces as sites for unveiling their works – noting such appearances as Miguel Chevalier’s 2017 exhibition ‘Paradis artificiels,’ an immersive installation work presented at the Parc du Domaine régional de Chaumont-sur-Loire.<sup>290</sup>

I have thus chosen to view this sustained connection of French texts to exhibition spaces as crucial to any reading of French digital literary production. I see the latter, as I have shown, as distinctly characterised since its emergent years by the spatial and dimensional interests that arise from thinking these works in relation to the space of exhibition, as opposed to the enclosed and flattened surface of page or screen. Moreover, as I have argued towards the end of the second chapter, that more text-heavy instances of works closer to the print tradition or the ‘American’ hypertext, for instance, are a rarity in the French landscape compared to installation and performance works, and the tactile and web-based works also seem to have absorbed these interests in physicality and gestural manipulation as a physical extension of the work.

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<sup>290</sup>Miguel Chevalier, *In-Out Paradis Artificiels* (2017)  
<<http://www.miguel-chevalier.com/fr/out-paradis-artificiels>> [accessed 6 March 2018].

### **Exhibiting Text(s)**

The continued presence of exhibitions as sites for the discovery of experimental and digital texts call into question the way in which such environments have facilitated the evolution of these and how the role of the site has consequently changed over time. The conduciveness of assisted literary forms to the exhibition context may, in terms of the early years prior to *Les Immatériaux*, be understood as largely due to the possibility of accompanying the public in their discovery of these kinds of works, as well as ensuring the presence of those familiar with the methodologies required in order to engage with the texts prepared.

The museum or exhibition structure thus took on the role as a kind of physical metatext that shaped and guided readers in their experiences and responses. Indeed, the shift away from complete literary forms as works to be consumed individually and privately in favour of open and unstable works, whose content is ever-changing in response to the manipulations of the reader, may be seen as facilitated by the very crucial opportunity to present the kinds of interactions envisaged by practitioners in this kind of context.

The way in which the majority of texts presented at *Les Immatériaux* were displayed, it might be argued, represented no great novelty or advancement relative to those works previously exhibited by the Oulipo or Alamo, for example, at events such as the *Europalia* festival in Brussels in 1975.<sup>291</sup> Indeed, the kinds of generated and combinatoric works presented at some of the exhibition's sites, such as the 'Rimbaudelaires' and similar, recombined poetic forms, were very much in the same vein as the kinds of works these groups had been presenting to the public for many years at this stage.

What was notable about *Les Immatériaux*, then, in this regard is its situation at a kind of turning point for these textual forms: the exhibition demonstrated the progress that had hitherto been made with methods such as syntactic modelling and permutational programs, and this in relation to the surrounding works and art forms seemed to suggest the urgency of new and less restrictive forms for assisted literature,

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<sup>291</sup>See Chapter 1 of this thesis for details of the *Europalia* festival and the works presented there by the OuLiPo.

which would better represent the intermedia aspect and the evolving quality or fluidity of works being created in other artistic fields.

The Internet, which was soon to host many interactive narratives, was to represent the most mature stage of dissolution of media boundaries and distinctions. At the same time, the possession of an ‘address’ for works created online recreated something of the museum or exhibition effect suggested earlier, whereby this signposting of the text allowed it to benefit from some of the identifiability and validation of a Work, while maintaining the advantage of structural openness.

The kinds of valency observed in other artistic works with further, distinct yet compatible, forms appeared absent in the self-contained experimental texts shown at *Les Immatériaux*, a kind of openness and agility that also came to be considered generally desirable in the new mode of composition that was to be developed. Jean-Pierre Balpe was to be a hugely pivotal figure in his revision of the aesthetics of assisted texts, particularly in terms of the ‘procedural aesthetics’ to which I briefly referred earlier.

### **The entwinement of the physical and the material**

As I outlined in the overall introduction, this thesis is divided into two sections, the first of which examines material factors and how the ideas of creators and theorists of early electronic literatures interacted with and were affected by these. Until the advent of the Internet, I argue, material factors such as the feasibility of creating literatures for floppy discs and the restrictions on distribution that this entailed, or access to computing expertise and specialised mediation required between the artist and the technologies to be approached, for instance, were among the greatest considerations in critically assessing the kinds of works that emerged.

Since the late 1990’s and early 2000’s, by contrast, these material factors in terms of the resources required to create works have become a lesser consideration, with the processes of composition and sharing of works rendered significantly swifter, with geographical distance reduced to a negligible consideration and with works now becoming essentially free or costing very little to produce and distribute.

Considerations in terms of the physical and material dimensions of electronic and online literatures nowadays, I argue, must be reorientated towards the repercussions these have both for the perception of literary value in works that are in

some cases mass-produced, often sent to readers at random, and occupy open, often unmarked spaces of the web, and so do not benefit from the enshrinement of a work or artistic event elsewhere achieved by way of the rite of purchase.

Further to these contemporary considerations, the reader's immaterial labour in terms of their indebtedness to the device and the gestures, the time investment and physical sacrifices involved in interacting with the work, such as eye strain and the RSI against which Annie Abrahams warns readers in *Séparation*, a text I have discussed here in the fourth chapter, are coming to the fore, with makers of digital literature prompting enquiry into these questions through the solicitation of various, and often very demanding or challenging, reading modes.

Indeed, calling for the identification and application of these material considerations to the field of digital literature on an international level is but the tip of the iceberg. Sandy Baldwin's recent work has signalled the tacit restrictions of e-lit discussions to the developed countries from which these literatures continue to emerge, and warns against assumptions that the internationalisation of the field is truly widespread and inclusive.

It should certainly also be noted that my discussion of material factors to be considered in analysing and considering electronic literature as a field of creation and readership, I have not engaged with the kinds of environmental concerns valuably highlighted by Eugenio Tisselli in his article 'Why I have stopped creating e-lit,' an omission which should be no means be understood as a negation of the value and urgency of such reflections.<sup>292</sup> Among other objections, Tisselli disputes the continuation of experimentation and composition in the field of electronic literature, experimentation that requires both electronic energy and mineral resources in terms of the technological platforms for which these works are destined, and on which these works are created, 'only for the sake of exploring new formats and supports.'<sup>293</sup>

Tisselli's criticism of the field thus represents an important call for a pause in blinkered production for production's sake, in order to compare the material consumption entailed in the creation of digital literature and artistic works with the environmental repercussions of these practices. Tisselli's response to these questions

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<sup>292</sup>Eugenio Tisselli, *Why I have stopped creating e-lit* (2011) <<http://netartery.vispo.com/?p=1211>> [accessed 20 July 2018].

<sup>293</sup>Loc. cit.

is, rather than the cessation of electronic storytelling practices, a reorientation of these methods towards the communication of more ethically engaged narratives.

Tisselli, for example, demonstrating this kind of revision of working methods and more considered approach to the application of electronic storytelling, subsequent to the publication of this article undertook a digital project whereby he collaborated with a group of Tanzanian farmers, using online tools to document these farmers' 'practices, needs, and innovations.'<sup>294</sup>

### **'Échantillons' and self-reflexive texts**

Though contemporary works of French digital literature that I discuss in these chapters, such as those of Serge Bouchardon or Xavier Malbreil, are indeed presented by these practitioners as literary or narrative texts and at times as 'literatures,' I argue that, on first sight, these works continue to appear to readers as texts - sample structures and techniques for the use of computers in the relaying of literary material, in Barthesian terms, the manifestation of text as 'champ methodologique.'<sup>295</sup>

Currently passing through the phase in this ongoing process of development whereby the works interrogate their own status in relation to the machines on which they are created and displayed, it would seem to be the case that, to qualify as literary, the content would need to outgrow this technological encasement. On the other hand, it is this gating and assignment of address, homepage, etc. that allows the text to be enframed as a distinct work, as opposed to unassigned text strands. Indeed, if the aim and the end point of these texts were acceptance as literary works, some simultaneous inhabitation of the (web)site and heavy reinscription of its features would be required: we may gradually realise that neither is characterising the texts I have used as examples here as undifferentiated, fluctuating and mobile moods of textuality, occupying a phase that is by definition continuous, useful to understanding where the reader's encounter unfolds. It is necessary to situate these between the Barthesian *oeuvre* and *text*, in the liminal space traced by Barthes in suggesting these markers.

Moreover, for these self-reflexive texts to be fruitfully received and discussed, the dimension of implicit commentary must be understood as representing a strong

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<sup>294</sup>Loc. cit.

<sup>295</sup>Ibid, p.71.

albeit simultaneous element within the work that both overlays and calls into question the elements of novelty through which these commentaries are transmitted. If these works and the insight they offer by occupying a space between Work and Text, by creating and developing self-reflexive themes, represent new interests and potential for a broadening of our definitions of the literary, hitherto restricted by the spectre of the *oeuvre*, these must not be seen as partly elaborated or partly evident in the form of examples whose status remains close to the ‘échantillons’ described by Francois Le Lionnais in 1964, but instead this fragmentary quality and the influences for whose seepage these cracks allow should be accepted to essential to the formal diversification these works’ presence represents.<sup>296</sup>

I hope, then, to have dispelled some of these potential and hasty allegations against the ‘literariness’ of digital literatures, questions I most pointedly explore in the sixth and final chapter of this thesis, whereby I demonstrate that, rather than refusing to enter into the modes of operation and expression traditionally undertaken in literary production, these works challenge the very definition of the literary *qua oeuvre* as textual excess, superfluous works, and rather offer as a challenge these volatile textual fragments whose value is gained by the reader’s appreciation or detection of a particular poetics at work therein.

Moreover, the procedural model suggests the notion of textual excess as equally possible and compelling when produced through a dynamic and emergent process as opposed to a substantial accumulation or a stagnant manifestation of substance. We are thus prompted to question our assessment of works on the basis of their ‘final’ form, as opposed to a draft, a work in progress, destined to be exhausted as opposed to preserved. Far, then, from liminal, lesser, adjacent aspects of the literary tradition, as compositions incomplete or subordinate in their relationships to written works, these mobile texts come into view as provocative formal oscillations, as part of a radical wave of criticism of literary institutions actively aiming to redefine and beckon novel practices across what have hitherto been understood as the thresholds of the field.

When removed from such contexts, a text such as Serge Bouchardon’s

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<sup>296</sup>As quoted in my first chapter, François le Lionnais, in the Oulipo meeting notes of March 1964, affirms the aims of the Oulipo to produce samples of literary methods, as opposed to full scale literary works: ‘Néanmoins, je voudrais bien insister sur le fait que nous ne sommes pas une école littéraire. Nous n’avons pas, l’Oulipo n’a pas, à écrire d’œuvres. Des échantillons suffisent.’ Fonds Oulipo.



*Toucher* (2009) might be easily dismissed: the individual strands of the work might appear to a certain extent as forms adopted fleetingly, with tenuous relationships to the content being depicted, in order to showcase particular relations of narrative or ludic material to their host technologies. The ‘broadening’ of the field, however, will be engendered by digital creation that successfully affiliates literal (ie. letter-based) material, with multimedia elements and forms drawn from other artistic circles and research fields, placing these in dialogue in order to test the traditional constraints of textuality and text-based works. Digital literatures thus continue to contribute to the expansion of literary understanding by repeatedly undermining the perceived inseparability of literature or artistic writing forms from the enclosed structure of the printed book, and through the animation, via letters and other modes of expression, external to the familiar shape of the tome.

### **Can we (still) speak of a ‘French’ digital literature?**

Holding up the Oulipo’s intentions to make use of the computer, as the group articulate this in the *Premier manifeste* against the Electronic Literature Organization’s official definition of e-lit, I consider this not merely a moment of crucial appearance of the ideas that foreground what would later become known as digital literatures, but also an announcement that the self-conscious practice of electronic literature in France was due to begin:

...Ce que certains écrivains ont introduit dans leur manière [...] l’Ouvroir de Littérature Potentielle (l’OuLiPo) entend le faire systématiquement et scientifiquement, et au besoin en recourant aux bonnes offices des machines à traiter l’information.<sup>297</sup>

Electronic literature, or e-lit, refers to works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer.<sup>298</sup>

Oulipo is considered by some to be the latest and the longest-running of the twentieth century French avant-garde movements, and indeed the group is still active today,

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<sup>297</sup>Oulipo, *La Littérature Potentielle*, p.17.

<sup>298</sup>Electronic Literature Organization, *What is e-lit ?* (date unavailable) <<https://eliterature.org/about/>> [accessed 22 June 2018].

although operating in a rather different vein to these early years, with little to no mention of the digital characterizing the works being produced by the current *ouvroir*.<sup>299</sup> Though these early links have made past decades of literary computing in France a relatively homogeneous subject of study, the field has more recently become vastly more varied in terms of the approaches encountered, with many individual practitioners working today, each demonstrating their own approach to the creation and dissemination of these works.

While a categorical grouping of electronic literature cannot neatly be formed under such bases as language or genre – and the text/work porosity at play in many of these texts is unsatisfyingly stifled by the clustering of these texts and diverse forms as ‘literatures’ – one of the advantages to be gained by grouping these texts together is exactly the ability I have afforded myself here, namely that of reading texts in light of their historical context and the surrounding material factors that may or may not have nourished certain aspects of the tradition.

One of the main lines of argumentation I have adopted when writing of certain digital works as part of a ‘French’ grouping concerns the particular, apparent failure or simple aloofness on the part of French publishing houses (and of course here I generalise, and omit mention of some minor, specialised agencies I write of in the second chapter of this thesis) to assimilate works of digital literature and accommodate their particular features.

Even nowadays, it would seem that digital literature is seen by most major French publishers as an exception to be nodded to once in a while, as occasional novelty appearances flecking a more reliable print output – I think here specifically of the example I cited in the second chapter, that of Mathias Malzieu’s work, *L’Homme Volcan* (2013), an animated text published jointly by Flammarion and Actialuna as ‘leur premier livre application sous forme de fiction adulte.’<sup>300</sup> Aside from this work, Flammarion’s other forays into the digital entail the relatively low-risk creation of e-reader friendly versions of the publisher’s print output. Today, electronic literatures in

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<sup>299</sup>For framing of Oulipo as an avant-garde movement, see, *The End of Oulipo? An Attempt to Exhaust a Movement*, ed. by Lauren Elkin and Scott Esposito (Winchester: Zero Books, 2013) or for a more detailed situation of the group see Edward Lintz’s section in *European Avant-garde*, in which Lintz discusses Oulipo as a neo-avantgarde movement, taking the aims of its predecessors ‘one step further.’ *European avant-garde: New Perspectives: Avantgarde, Avantgardekritik, Avantgardeforschung*, ed. by Dietrich Scheunemann (Amsterdam: Rodopi, 2000), pp. 199-211.

<sup>300</sup>Ibid.

France continue to occupy a marginal place relative to print literatures, a liminality from which these texts implicitly challenge and comment on some of the limitations of print culture.

One of the consequences of their extended disaffiliation from the print tradition might be seen in the resistance or tendency of French works to demonstrate a quality opposed to verbal effusiveness as part of their literary nature (contrasting with the more text heavy ‘American’ hypertext) and in place of this, we can see a more verbally minimal and more creatively spatialised conception of works that typically contain lighter literal components, meditating more lengthily on how these fall within the space of operation and display of the work. I have argued here that French digital texts have from the outset found closer kinship with artistic traditions aside from the print literary tradition: including video art, plastic, sculptural, performance or installation works, and this proximity continues to inform the works and currents observed today.

In my examination of these literatures undertaken in the chapters of this thesis I highlight that, from the very beginning, literary works that involved the computer in their composition or display were introduced to the public in the context of exhibitions and festivals, as opposed to in a format that could be taken home and read. Though such forms – electronic literature journals, such as *KAOS* and *alire*, which were released in the late 80s and early 90s on floppy discs – were later produced and made available to readers, as I have explored in the second chapter, museum and exhibition spaces have always proven to be fruitful environments for exploring the kinds of forms and works being produced by French e-lit practitioners, as may be seen from the continued presence of exhibitions as crucial outlets for digital creation in France throughout the time period I have examined.

Though more recent works have begun to appear online and for reading on tactile devices, I suggest that the important gestural components of these are informed by such a trajectory through an understanding of the text as an immersive and spatially complex physical experience. This break that I have suggested between e-literatures and the print tradition in France is not intended to affirm, however, that current examples do not exist of writers who straddle the boundary between traditional and electronic literatures, and I have clarified this in the second chapter when dealing with publication and creative practice.

Examining the Electronic Literature Collection, Volume 3, a comprehensive anthology of e-literature published in 2016, we notice an option to view the texts included by country.<sup>301</sup> This optional perspective demonstrates the continued presence of national context, but as one of many axes of consideration that interweave these anthologies and works, as factors that partially determine some aspects of their reception, or may be taken into consideration when readers are choosing works to read and navigating the field.

Interestingly, the selection of the country filter demonstrates the demotion of currency of the works that such a perspective underscores: the French works listed may thus be exposed as spanning a number of years. Works by the oulipian Paul Braffort, for instance, are included in the collection, and these date much further back than 2016. According to Sandy Baldwin, this inclusion of historical works is a deliberate aspect of the anthology formation as carried out by the ELO.<sup>302</sup> One wonders, however, whether the value of such resistance to a chronological understanding might still be considered a productive resistance to the imposition of canonical and traditional literary categorisations, while at the expense of a nuanced understanding of these works in terms of the technologies available at the time of their production.

One might attempt, finding the rough association of certain genres with certain geographical areas to be insufficiently neat, to wrap up a kind of overview of French e-lit creation by attributing specific aesthetic tendencies to particular currents or groups of literature. Though it cannot be argued that a distinct tradition of French digital literature exists, arguments that distinctly French aesthetics and trends within the broader tradition of digital literature have been made.

Philippe Bootz, for instance, has presented the ‘esthétique de la frustration’ as something of a French exception, claiming that the latter predominantly defines and characterises French works, although, examining the definition thereof more closely, it cannot possibly be argued that this aesthetic is at work solely or even markedly in French texts in particular. Though I have exposed the notion of the ‘esthétique de la frustration’ elsewhere in this thesis, it is worth revisiting some definitions thereof here

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<sup>301</sup>Various authors, *Electronic Literature Collection, Vol. 3* (2006) <<http://collection.eliterature.org/3/>> [accessed 6 March 2018].

<sup>302</sup>Sandy Baldwin, ‘Other Codes’ keynote lecture, ‘E is for Empire’ Galway, Ireland, May 2017.

and querying how the ideas denoted might be applied to literary works outside of French e-lit:

L'esthétique de la frustration consiste à attribuer, dans le projet d'écriture, une valeur sémiotique à l'activité et aux réactions du lecteur. Autrement dit, à considérer que *l'activité de lecture elle-même, dans son aspect béhavioriste, fait partie du texte.*<sup>303</sup>

L'esthétique de la frustration est une forme numérique. Elle apparût en 1996 dans *Stances à Hélène* (Philippe Bootz et Marc Battier). Elle est aujourd'hui largement pratiqué par les auteurs français. Elle utilise la déception, la frustration, l'échec de lecture... du lecteur, autant de situations négatives que, d'ordinaire, un auteur tente d'éviter.<sup>304</sup>

Philippe Bootz has also argued that the French aesthetic has allowed for a linking and transcendence of genres - in 'From Oulipo to Transitoire Observable The Evolution of French Digital Poetry,' Bootz writes:

A coherent French aesthetics gradually developed, dealing with both real and imaginative behaviour of the device, with the relation between the text and other parts of the system, with the relationship between the work and the reader. In this new conception, hypertext, generation and animation were no longer different genres but different complementary facets of works.<sup>305</sup>

I would argue that, though the aesthetic of frustration allows for many of the works to be productively derailed from their own smooth running, thus serving some of the points being made about texts' steady absorption into the more stable features of the Work, Bootz' envisioning of the role of this aesthetic linkage is too totalizing and ultimately does not allow for the fact that instances of this, furthermore, rather manifold aesthetic, might arise incidentally or indeed deliberately in works with little or no connection to the French digital tradition.

Examining the definitions that are given of the 'esthétique de la frustration' in different articles and works, it may certainly be argued that comparable effects have been employed in works external to the French tradition, such as Noah Wardrup-

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<sup>303</sup>*Poétique des Codes*, p.39.

<sup>304</sup>Bootz, *Qu'apporte l'interactivité*.

<sup>305</sup>Bootz, *From Oulipo to Transitoire Observable*.

Fruin's 2002 text, 'Screen,' a work created for the Cave simulator at Brown University, to name just one example.<sup>306</sup> In the reader's experience of *Screen*, words begin to come loose and fall from the walls of the environment in which the text is read. The reader must physically replace the words, a task that is achievable for a certain period of time, before the words begin to accelerate, and a greater number thereof begin to fall simultaneously than before, reducing the reader's efforts to a hopeless scramble.

Though not inscribed within the explicit tradition of the 'esthétique de la frustration,' then, *Screen* may be clearly seen to engage with the same strategies of highlighting readerly participation. Though the 'esthétique de la frustration' might be evoked as a critical point of reference in the analysis of such works, stemming from the French theoretical sphere relating to digital literatures, its identification or detection in works whose author is unknown, for example, may be scarcely taken as a guarantee that the work stems from the French tradition.

### **Conclusion**

It has become clear here that exploring Work/Text liminality through spatiality and the body calls for new understandings of materiality that allow for the coextensivity of technology and biology to be reworked and reimagined. One possible route to such an enquiry into these material dynamics is Gaston Bachelard's comparison of formal and material properties. In *L'Eau et les rêves: Essai sur l'imagination de la matière*, Bachelard calls for a distinction between a formal imagination and a material imagination, according to which the material imagination is associated with permanence and the formal imagination is associated with novelty and change.<sup>307</sup> In this distinction, of course, the work as former and text as the fluctuation of the latter is clear.

Bachelard's proposition of such a dichotomy between materiality and formality proves a stimulating vector for contemplating some of the new textualities in operation today, and how these undermine prior understandings of fixed or polarized materiality. Certainly, it is important to develop a way of envisioning the new materialities – at this point, as distinct from the late 1980's, there seems to be no

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<sup>306</sup>Ibid.

<sup>307</sup>Gaston Bachelard, *L'Eau et les Rêves: Essai sur l'imagination de la matière* (Paris: J. Corti, 1985), p.7.

longer much to be gained from entertaining the question of an ‘immaterial’ mode of artistic production, but rather the formulation of a kind of spectrum of material presences, not based on physical density, but perhaps on the degree of interaction these might be measured as attracting and demanding.

Equally, it is of limited use to characterise formal qualities in new digital creation as increasingly loose, formless and unlatched, with the almost accelerationist assumption of uncritical forward progress that such depictions assume. We must, then, grapple for appropriate descriptions of the forms that formlessness is but the failure to describe, through an enhanced sensitivity to and understanding of the materialities that support and relay these forms.

Digital texts, and this is particularly evident in my final chapter, appears to generate an explosive ambiguity as a simultaneous high and low art form – obscure and thereby carrying a certain niche prestige, akin to the pioneering works of high culture, while on the other hand produced at little to no cost and mass-produced in some cases, such as that of the spampoetry created by Philippe Boissard, which I have examined in the last chapter.

Digital literature belongs to a field that we as analysts and readers are constantly watching, perplexed, as it evolves. Already these works’ recent or historical manifestations may escape us, both literally as in the fleeting elements of texts designed to frustrate smooth readership, and more subtly, like the mass-mailed spam literatures deployed by the likes of Philippe Boissard, depending on attention to finer detail from the unsuspecting reader to save the disguised work from curt deletion, and so an attempt to think forward and anticipate the kinds of literary models the current works are prefacing would be immensely difficult.

Certainly, in studying the works produced in the years covered by the first section of this thesis, the construction of a national frame for analysis offers one fruitful way of considering the birth and development of earlier computer-assisted works, in terms of the material conditions of their emergence. Such an approach should nonetheless be recognised in its limited capacity as but one facet whereby such works might be considered, and, like the operative term in a hypertext, it leads us down one line of enquiry that is far from singular, definitive, or terminal.

We might still then speak of a French digital literature insofar as these search criteria continue to herald results, and insofar as an overlapping of filter terms offer us

a selection from the more heterogeneous breadth of this expansive field of works; however, in line with the nature of the field of electronic and digital literatures more generally, creation as it is occurring in the field at present may be safely seen as unshackled from any one tradition, be it national, linguistic, literary, or aesthetic, and it is with this in mind that we should proceed in our interactions with these works: informed but unbiased in terms of tradition and affiliation.

Serge Bouchardon's article, 'Digital Literature in France,' attempts to trace out a rough trajectory of the evolution and stages of French digital literature up to the present, drawing the conclusion that the contemporary e-literature being produced in France is characterised by a strong interest in texts that involve 'interactive manipulations by the reader' in the case of online texts destined for private reading, and a trend towards performance works, which fall outside of the private reading space.<sup>308</sup> As examples of the latter, Bouchardon mentions the work of *HP Process*, *XLR Project*, Annie Abrahams, and Luc Dall'Armellina.

The group *HP Process* is described as "an entity in the conjunction/disjunction that develops a practice of digital action art and a verbi-voco-visual writing. They work primarily with an intermedia poetry performance where image and sound are generated in real time and interactively, in a logic of jamming the different spaces of representation and perception."<sup>309</sup> In the work of *HP Process*, body and text intermingle in the work of creating a type of kinetic poetry in constant reconfiguration. Hortense Gauthier and Philippe Boisdard (whose Spampoetry has already appeared in the last chapter) also use voice and breath creatively, passing these through digital amplification methods and expanding them to create immersive sound poetry landscapes.

The second grouping Bouchardon mentions, *XLR project*, is a laboratory of multimedia art and production, which combines video music, dance, theatre, architecture, light and literature through the use of new technologies.<sup>310</sup> Annie Abrahams' performance works, rather different to the online, interactive text by

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<sup>308</sup>Ibid. Perhaps the roots of both of these rough trends may be found reunited in a possible source in the works of the Akenaton group and Philippe Castellin, who are very much engaged with both installation and performance forms for poetry. I shall discuss the group in the second chapter of this thesis.

<sup>309</sup>Hortense Gautier et al, *HP Process* (2014) <<http://liveaction.se/la-7/artists/hp-process-france.html>> [accessed 6 March 2018].

<sup>310</sup>Nicolas Ticot et al, *XLR Project* (2017) <<http://www.xlrproject.net/about.html>> [accessed 6 March 2018].



Abrahams encountered in chapter four, include the 2012 work, *Beyond*, which consists of a three-day long project whereby 5 artists collaboratively prepare and enact a performance each day. The artists are able to collaborate remotely thanks to an interface, which combines the distinct sounds and images from each of their webcams into a single video projection.<sup>311</sup>

Bouchardon's observation of these two prevailing forms thus demonstrates the pre-eminence of the experiential and semiotic body in both public and private forms of contemporary digital culture, on the one hand in the growing repertoire of physical manipulations of computing equipment encouraged by online digital texts experienced by readers at home, and on the other in the increasingly sophisticated installations that respond to the reader/visitors' physical presence and immersion.

In this thesis I have, however, questioned the novelty of this physical dimension, investigating the way in which physical and material factors have been primordial influences on digital literary creation from the very emergence of the field, and thus situate these trends for physically manipulable and immersive, responsive works as the most recent manifestation of the technological arts' joint implications in the physical and the digital.

One of the arguments I have developed here is that in favour of exhibitions as metacontexts for the endowment of worklike status on fluctuating textual forms, allowing these to benefit simultaneously from characteristics of the Barthesian *oeuvre* and *texte*. I argue that, to some extent, the Internet accommodates digital texts and online art in a comparable way. The Internet may thus be understood, in light of what I have presented, as a facilitator for the procedural aesthetic approach to digital creation to be maintained as mobile and interactive, and in this sense, textual – whereas the worklike status of such text may be partially endowed, akin to the signpost offered by the gesture of exhibition, by the web address, introductory page, instructions, etc., all of which allow for similar metadata to be provided which enframe the textual procedure as a work in progress.

*Les Immatériaux* thus, in its networked writing sites, may be considered to have assisted the gradual transition that was already underway in 1985, which diverted considerations of textual structure from internal and enclosed to outward and

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<sup>311</sup> Annie Abrahams, *Beyond* (2012) <<http://www.bram.org/huisclos/beyond/>> [accessed 6 March 2018].

looser forms, combining this set of concerns into the overarching question of how better textuality and narrative might interact with possibilities offered by space and dimensionality, as well as those of the nascent and new materialities of the digital age.

Indeed, in the merging that connectivity has engendered between the immediately tangible world, and the mediated world that interweaves as ever-present, Barthes' description of the Work as something 'qu'on tient dans la main,' seems particularly naïve in its simple delineation between present and absent, tangible and intangible, complete and partial, static and mobile.<sup>312</sup> What was becoming evident at the time of *Les Immatériaux*, and has only become more so since, is the compelling porosity and urgency for understanding the space between *oeuvre* and *texte*, and for the formulation of an understanding of literariness that might be situated and identified in this space.

If the Text cannot be preserved or maintained without such sacrifices and cessations of textual dynamics in favour of the shaping of a fixed 'Work,' as was the case with editing the 'Épreuves d'écriture' experiment for publication, the question arises as to whether the Text necessarily has to have an afterlife, and if so, whether this form can genuinely be so very distinct from that of the Work?

Indeed, the Text must have some form of lasting presence if we are to isolate and discuss texts such as 'Épreuves d'écriture,' and the online and emailed works described in the fourth, fifth, and sixth chapters. Noting that we do not discuss the internal discussion of the authors in the case of 'Épreuves d'écriture' – who kept their tangential writings as integrally their own, as text islands within the larger project – so much as the situation to which its constraints gave rise, we see that textual production in the open, multiply authored mode is still conceived of in terms of its foreignness to more personal and territorial practices of inscription. In a collectively authored evolving text, surely any quotation holds as much exemplary or indicative value as another.

There is something of a paradox, therefore, in our understanding of examples of Text – namely, to be examined in line with the attributes ascribed to Text, examples must be received or selected in such a way that implies that some of the most crucial features of the phenomenon of Text have already been stifled – the

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<sup>312</sup>Ibid.

backward glance at an example formed, for example, implies an ending and point of closure at some stage in production.

In conclusion, in line with the above argument, any discussion of a particular instance of textuality, however mobile and volatile the form in its unique procedural present, necessitates its association with an author or team of creators, and suggests its enclosability in an environment such as an exhibition site or, more recently, a distinct set of interconnected web pages. While then, the Work benefits from protection, Text in the pure sense is everything expressed in letters, and so the space between these designations must be explored so as to nuance the space between Work and Text: this, I argue, is where digital creation, with the assistance of interacting bodies, may illuminate, where print works are limited to reiteration.

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